

ABSTRACT

Title of dissertation: WASHINGTON'S MAIN STREET: CONSENSUS AND
 CONFLICT ON THE CAPITAL BELTWAY, 1952-2001

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This dissertation combines approaches from cultural landscape analysis, ethnography, and planning history to study the Capital Beltway in Maryland, Virginia, and Washington, D.C. as both a physical artifact and a social institution. Drawing on interviews, survey data, fieldwork, and documentary research, I explore the ways in which the Beltway, its creators and users, and its surrounding natural landscape have affected each other over fifty years.

Three research methods underlie this study. First, I introduce an analytical framework for odology, geographer J.B. Jackson's term for the study of roads, focusing on the beliefs and values roads reveal and create, dynamics of power and access, contributions to normativity, issues of conflict and consensus, and effects on individuals' lives and identities. Second, I develop and apply a detailed fieldwork model for cultural

landscape analysis, building on previous efforts in cultural geography and material culture studies. Third, I draw on and analyze the dynamics and results of a Web survey.

The dissertation provides the first detailed discussion of the Capital Beltway's development and construction in Maryland and Virginia, drawing in part on interviews with ten of its original engineers and beginning with an overview of the origins of beltway planning in the United States. It examines the Beltway's effects on individual lives, communities, and the broader metropolitan Washington region, concentrating on conflicts and perceived inequities created by the Beltway's construction, and on both states' efforts to pursue their own agendas and also to redress residents' concerns over the fifty years covered. The study addresses both physical and cognitive manifestations of the Beltway, exploring how the road exists in the minds of the people who use it and how its material and conceptual iterations combine to play an integral role in their lives. It also analyzes how the Beltway serves concurrently as a template through which individuals and groups promote their values and beliefs, as a venue of conflict and community, as a vehicle for the creation of a distinct regional identity, as a site of negotiation between public and private space, and as a site for mediation and compromise in inter-jurisdictional cooperation.

WASHINGTON'S MAIN STREET: CONSENSUS AND CONFLICT ON THE
CAPITAL BELTWAY, 1952-2001

by

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¹ See Charles H. LeeDecker, Brad Koldehoff, and Cheryl A. Holt, Excavation of the Indian Creek V Site (18PR94), Prince Georges County, Maryland, Final Report (Philadelphia and Washington: Wallace Roberts & Todd and Washington Metropolitan Area Transit Authority, 1991).

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TABLE OF CONTENTS

LIST OF FIGURES	xiv
LIST OF TABLES	xv
LIST OF ABBREVIATIONS	xvi
CHAPTER 1: "A Tangible Presence That Has Affected Us in Many Ways": Studying the Capital Beltway	1
Shortcomings of Existing Analysis and Scholarship	4
What is Odology? Building Toward a Study Model	11
Guiding Questions	20
Organization	29
CHAPTER 2: "Most of Those Involved . . . Are Dead": Selection and Implementation of Study Methods	33
Cultural Landscape Analysis	35
Documentary Analysis and Planning History	41
Ethnography	44
Web Surveys: Reversing the Traditional Dynamics	49
CHAPTER 3: "There Was Just No Easy Way to Get Anywhere": Washington's Transportation in the 1950s	66
America's Beltways	67
Postwar Metropolitan Washington	75
Getting Around	80
Washington's Other Beltways	90
CHAPTER 4: "A Huge Wedding Ring for Metropolitan Washington": The Coming of the Capital Beltway	101
The Washington Circumferential Highway in Maryland	109
The Capitol Ring in Virginia	131
Before the Opening: Playground and Racetrack	141
Closing the Circle	145
CHAPTER 5: "This Was a Nice Place:" Conflict and Anger	154
The Disappearing Parkway	160
Living by the Beltway	186
CHAPTER 6: "I Am Being Raped by VDOT:" Virginia's and Maryland's Struggle for Consensus	208
Pedersen's Paradox: Neither Answer is the Answer	216
The Old Dominion Paradox: A Planning Process Both	

Inclusive and Exclusive	238
CHAPTER 7: "A Deer Doesn't Stand a Chance": Good Calls, Bad Calls, 10-45s, and the Physical World of I-495	271
The Nature of the Beltway	272
The Material Culture of the Beltway	289
Living on/with the Beltway	313
Who's Missing	337
CHAPTER 8: "The Beltway Alone Will Keep Me From Returning:"	
The Capital Beltway and/in Individual Lives	349
The Web Survey Respondents	350
Is the Beltway Safe?	363
Coping With the Beltway	372
CHAPTER 9: "Surrender Dorothy:" The Beltway's Roles and Effects	382
In the Loop: The Beltway as a Pawn	383
Battleground and Community	399
Public or Private Space?	422
Stirring the Jurisdictional Soup	428
A Catalyst for Development?	440
CHAPTER 10: "What the Pave Meant": Coming Full Circle	454
Summary: Significance of the Capital Beltway	455
Looking Back and Looking Forward	463
APPENDICES	
Appendix A: Cultural Landscape Fieldwork Model	476
Appendix B: Web Survey	511
FIGURES	520
WORKS CITED	530

LIST OF FIGURES

1.	Washington, D.C. metropolitan area	520
2.	1952 design for the Capital Beltway in Montgomery County, Md.	521
3.	1950 Washington, D.C. regional plan showing three ring roads	522
4.	Fort Drive, 1952 map	523
5.	1955 progress report of highway construction for Montgomery and Prince Georges Counties, Md.	524
6.	1952 design for the Capital Beltway in Prince Georges County, Md.	525
7.	Contractors for construction of Maryland portion of the Capital Beltway	526
8.	1964 Capital Beltway map	527
9.	Geology of Washington metropolitan area	529
10.	"Beyond the Beltway"	530
11.	1961 map of residential development in Washington area	531

LIST OF TABLES

1.	Cultural Landscape Study Model (2002 Revision)	36
2.	Sources for Finding Out About Web Survey	54
3.	Transportation Funding Programmed for Fiscal Year 2001 in Washington, D.C., Maryland, and Northern Virginia	340
4.	Extent of Identification Disclosure for Web Survey	352
5.	Residence of Respondents by State	353
6.	Residence of Respondents by County or Autonomous City	354
7.	Residence of Respondents by City or Town	355
8.	Status of Vehicle Club Membership	358
9.	Age of Respondents in 2000 or 2001	359
10.	Gender of Respondents	359
11.	Race of Respondents	360
12.	Highest Level of Education Achieved	360
13.	Annual Household Income, in Dollars	360
14.	Employment Status	360
15.	Modes of Transportation for Non-recreational Purposes	361
16.	Primary Purpose of Beltway Use	362
17.	Geographic Distribution of Beltway Use	362
18.	Primary Distance of Beltway Travel	362
19.	Expressions of Displeasure on the Capital Beltway	373
20.	Personal Activities on the Capital Beltway	374
21.	Additional Personal Activities on the Capital Beltway	424

LIST OF ABBREVIATIONS

AAA	American Automobile Association
AASHTO	American Association of State Highway and Transportation Officials
BPR	Bureau of Public Roads (U.S.)
CCFD	Chevy Chase Fire Departments
COG	(Metropolitan Washington) Council of Governments
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency (U.S.)
FHWA	Federal Highway Administration
HOT	High Occupancy/Toll
HOV	High Occupancy Vehicle
HTML	Hypertext Markup Language
I-(number)	Interstate highway route (number)
ICC	Intercounty Connector
KVFD	Kensington Volunteer Fire Department
LOS	Level of Service
MSP	Maryland State Police
MTA	Maryland Transit Administration
MdTA	Maryland Transportation Authority
M-NCPPC	Maryland-National Capital Park and Planning Commission
NCPC	National Capital Planning Commission

NCPPC	National Capital Park and Planning Commission
NEPA	National Environmental Policy Act
NPS	National Park Service
SRC	State Roads Commission (Md.)
SHA	State Highway Administration (Md.)
TPB	National Capital Region Transportation Planning Board
TDM	Transportation Demand Management
TSM	Transportation Systems Management
URL	Uniform Resource Locator
U.S. (number)	United States highway route (number)
VDH	Virginia Department of Highways
VDOT	Virginia Department of Transportation
VMT	Vehicle Miles Traveled
VSP	Virginia State Police

CHAPTER 1

"A TANGIBLE PRESENCE THAT HAS AFFECTED US IN MANY WAYS":

STUDYING THE CAPITAL BELTWAY

Vic Sussman wrote in The Washington Post in 1989:

Relatives are flying in from East Podunk this tourist season, and they say they want to see the real Washington. Don't bother dragging them on ritualized pilgrimages to marble monuments and sleek museums. They're looking for the down and dirty they've heard so much about—the naked aggression, the power plays, the wheeling and dealing, the ferocious tooth-and-nail jockeying for position and leadership.

They want to see . . . the Beltway.

Why not? Our homebrewed Indianapolis 500 and giant parking lot is Washington's Grand Promenade, a circuit of decaying concrete and robust development linking homes and jobs in our booming international capital. As a tourist attraction, the Beltway symbolizes our very lifeblood, the politics and bureaucracy we thrive on: an unpredictably dangerous highway to everywhere and nowhere, a hellish road paved and repaved with good intentions and a sprawling, endless loop that daily flings us out into the world as crazily as it brings us home. Late.¹

As Sussman indicates, the Capital Beltway serves as more than a generic interstate highway. The 64-mile loop (shown as I-495 in Fig. 1), 42 miles in Maryland and the balance in Virginia with a sliver over the Potomac in Washington, is a commuter route, a throughway for long-distance travelers, and a traffic-jammed "parking lot" during certain hours of the day. But there is more than that. After all, the New Jersey Turnpike is not simply an eye-glazing toll road; to many it symbolizes its entire state, and has

¹ Vic Sussman, "The Best and Worst of the Beltway," Washington Post Magazine, 21 May 1989: 27-28.

entered the nation's vernacular through song and story.² The Capital Beltway, too, has taken on a life of its own beyond anything its creators might have expected.

The history and characteristics of the Beltway underscore the significance of roads as cultural artifacts. Material culture studies scholars attempt to understand cultural systems by looking at the dialectic relationships between humans and objects; cultural landscape analysts, as I will explain in Chapter 2, focus more broadly on the dynamic tensions between humans, objects, and nature. In both of those approaches to analysis of American culture, roads play a surprisingly important but often overlooked part. Roads are, for example, integral components of the American landscape and of people's daily lives. They reveal and create certain beliefs and values, they offer access and opportunity to certain segments of the populace while withholding them from others, and they affect the environment, and are affected by it, in myriad ways.

Still, historical and cultural scholarship has given minimal attention to the significance of roads. Recent decades, as we will see, have witnessed the emergence of the specialty field of odology, the study of roads, with published works including Karl Raitz's The National Road, Andrew Kress Gillespie and Michael Aaron Rockland's Looking for America on the New Jersey Turnpike, and several books about U.S. 66.³

² For examples, see Andrew Kress Gillespie and Michael Aaron Rockland, Looking for America on the New Jersey Turnpike (New Brunswick, N.J.: Rutgers University Press, 1989), 155-171; and Hank Steuver, "What Exit?", Washington Post, 5 August 2001: F1.

³ The term "odology" derives from the Greek "hodos" (road). See Karl Raitz, ed., The National Road (Baltimore: Johns Hopkins University Press, 1996); and Andrew Kress Gillespie and Michael Aaron Rockland, Looking for America on the New Jersey Turnpike (New Brunswick, N.J.: Rutgers University Press, 1989); Works on U.S. 66 include Michael Wallis, Route 66: The Mother Road (New York: St. Martin's Press, 1990); and Quinta Scott and Susan Croce Kelly, Route 66: The Highway and Its People (Norman, Ok.: University of Oklahoma Press, 1988).

Yet these few studies that have taken a cultural and historical approach to roads have focused on highways with nostalgic value and have ignored other types of roads, including less picturesque, urban, utilitarian expressways.

This is an oversight. As I demonstrate throughout this study, the Capital Beltway is a highly significant, complex cultural artifact as well as a key social institution. Almost from its inception, the Capital Beltway took on the informal designation of "Washington's Main Street," even though its physical presence in the District of Columbia spans all of a few hundred feet.⁴ Paul Dickson notes that the Beltway has influenced not only the physical appearance of the Washington region, but the mindsets of its inhabitants as well:

The Beltway is not just another 65 miles of gray and green interstate highway but a tangible presence that has affected us in many ways, including the way we think. . . . It has also changed the way we describe and think about where we live. Before the Beltway, people said they lived so many miles from, say, the Federal Triangle or downtown Alexandria.⁵

Similarly, demographer George Grier said of the nondescript Beltway, seven years after its 1964 opening, that it "may well be far and away the most important physical alteration in the physical structure of metropolitan Washington during the present

⁴ See, for example, Martha Angle, "Road Built as D.C. Bypass Has Become a Main Street," Evening Star, 21 March 1966: A-1; and Larry Van Dyne, "Getting There," Washingtonian, May 1990: 203-4. Joel Achenbach argues that a more accurate metaphor would be "Washington's Baggage Claim": "No one likes it but it always draws a crowd. Every moment you are there, you are tense, expectant, fearful of disaster. It's a conveyor of things, operating in two modes—functional and dysfunctional" (Achenbach, "A Loopy Birthday to the Beltway at 30," Washington Post, 17 August 1994: B1).

⁵ Dickson, 10.

century—a force which will influence patterns of growth for at least the remainder of the century, and perhaps longer."⁶

This single road unites and divides the Washington region in multiple ways. It structures the lives and decisions of thousands of area residents, resonates nationally as a political icon, and has even generated its own psychological disorder. Despite these and the Beltway's other effects on the region and beyond, scholars and planners have for the most part taken the Capital Beltway at face value—as a venue for vehicular traffic—and have not explored its more complex relationships with individuals, groups, and the Maryland and Virginia landscapes.

Shortcomings of existing analysis and scholarship

Conventional wisdom—that is, the picture painted by the major media and usually encountered in conversation with members of dominant segments of the Washington area population—has it that the Capital Beltway is simply a key highway, the road which has defined the Washington metropolitan area and which is the most important method of travel between the suburbs. Despite the traffic, in this view, the Beltway is still an invaluable resource. All hell breaks loose when, for example, the Beltway's Woodrow Wilson Bridge over the Potomac River shuts down for an accident; angry drivers and the American Automobile Association (AAA) forcefully criticize the delays, the assumption being that life in the region is disrupted when expected routines

⁶ [George Grier,] "Washington: A Beltway is creating new patterns which increase the independence of the suburbs from their parent," *City* 5:1 (January/February 1971): 46.

on the Beltway are interrupted. The Beltway, it would appear, unites and defines greater Washington, as first evidenced by happy letters from area drivers shortly after the road opened in 1964, who found they could access more sites in the suburbs in much faster time.

Yet while these observations are accurate, the situation is much more complex. The Beltway does not unite the region smoothly. Despite its single name, the Beltway from its inception has really been two separate roads, in Maryland and in Virginia, representing at least two distinct philosophies of planning. Drivers have generally been willing to overlook the differences between the two roads for the sake of the convenience provided by the full loop, but these contrasts have loomed large since the beginning and remain a critical factor today: for example, Maryland's and Virginia's current plans for traffic mitigation call for conflicting numbers of lanes to be added in each state (and for a possible rail line along Maryland's portion only), a plan which would guarantee bottlenecks on the bridges between states.

The schizophrenic Capital Beltway further serves simultaneously as Interstate 495, a highway serving local drivers, and Interstate 95, a link in the north-south expressway spanning the East Coast. Fulfilling either function alone would be a challenge given current levels of traffic. When the Beltway tries to do both, long-haul truck drivers become frustrated at the commuter flow, locals flare at the giant tractor-trailers in their way, and transportation officials find themselves constantly challenged to reach a fair balance. Even the local drivers have no love for each other, frequently spewing venom about the abysmal driving skills and complete lack of etiquette of their fellow commuters. In many ways, the Capital Beltway approximates more the "down

and dirty" battleground Sussman depicts rather than the regional "unifier and definer" suggested by Maryland Rep. Steny H. Hoyer.⁷

On the one hand, the Beltway is a product of engineering. It is an asphalt oval circumscribing the District of Columbia; the lanes closer to the city with clockwise traffic comprise the Inner Loop, while counterclockwise traffic travels on the Outer Loop. Four lanes run in each direction for much of its 64 miles, expanding to as many as six (on the Outer Loop between U.S. 1 and I-95 in College Park) and shrinking to as few as two (on the Inner Loop between MD 355 and I-270 in Bethesda). Steel guardrails and concrete Jersey barriers run intermittently adjacent to the shoulders. The median ranges from grass with steel guardrails in Prince George's County, Md., to Jersey barriers in Montgomery County, Md., to Jersey barriers topped with green cylinders, meant to shield opposing traffic from glare, in northern Virginia. Some half-dozen forms and colors of sound barriers sporadically line the outer edges of the Beltway's right-of-way, which is otherwise marked by chain-link fences except at interchanges. Aside from its drawbridge in the middle of the Woodrow Wilson Bridge spanning the Potomac River, the highway in its physical sense is not particularly different from other Interstates.

On the other hand, the Beltway has affected the nation's capital and the general Washington region in profound ways since its opening in 1964. "The objective of the Washington Beltway," a British transportation planner notes, "was simply to remove through traffic, but in fact it has had the effect of totally altering the manner in which

⁷ Quoted in Stephen C. Fehr, "Beltway at 25: The Road Most Traveled," The Washington Post, 17 August 1989: A1.

the city operates."⁸ As we will see, the Beltway's effects on regional development, policy, and personal life decisions have been anything but negligible. Further, the Beltway is perceived in vastly different ways by different individuals and groups of people, and in fact represents the nexus of multiple and constantly changing meaning systems. Even the road's physical form is problematic; the engineers in Virginia and Maryland who originally designed the highway literally conceived their respective portions of the loop as two different roads, as I will show. Yet surprisingly, despite the Beltway's regional and national significance, it has been given little attention by the academic community. Publications focusing on the highway are mostly studies of traffic, land-use impact, and environmental impact, while sociological or more multifaceted treatments of the road have been limited to a few shorter articles in newspapers and magazines.

The Beltway seems to fall through the cracks of the existing historical and geographical literature. Key works on Washington emphasize the city itself and address the suburbs only secondarily (or were published too early for the Beltway to be included); accordingly, they tend to mention the Beltway in passing if at all.⁹ Maryland

⁸ R.J. Brown, quoted in R.F. Kirby, "The Washington Beltway" and "Discussion," in D. Bayliss, ed., Orbital Motorways: Proceedings of the Conference Organized by the Institution of Civil Engineers and Held in Stratford-upon-Avon on 24-26 April 1990 (London: Thomas Telford, 1990), 116.

⁹ Washington D.C. currently lacks a comprehensive, up-to-date historical reference; recent scholarship has approached the city with specific objectives which have not lent themselves to coverage of the Beltway. Thus Howard Gillette Jr.'s Between Justice and Beauty: Race, Planning, and the Failure of Urban Policy in Washington, D.C. (Baltimore: Johns Hopkins University Press, 1995) traces Washington's racial history in great detail but bypasses the Beltway and, for the most part, the suburbs. Keith Melder's City of Magnificent Intentions: A History of Washington, District of Columbia, 2d ed. (Washington: Intac, 1997), a high school textbook which currently serves as a de facto general historical reference, allots several paragraphs and photos to the Beltway but

and Virginia historians, in turn, focus on more quintessentially Maryland and Virginia areas (Baltimore, Annapolis, Richmond, Newport News) and generally bypass the capital suburbs because they are more of a Washington phenomenon. Because the Beltway is in fact a suburban entity, one might expect histories of Washington's suburbs themselves to treat it in depth, but the existing histories of Prince George's and Montgomery Counties in Maryland, for example, are not scholarly and do not treat any given subject in depth, though they do at times give a superficial introduction to the Beltway.¹⁰ Because Washington historians have left alone the suburban Beltway and regional suburban historians have published little at the scholarly level, academic coverage of the Beltway is virtually nonexistent.

That is not to single out the Beltway: the roads and highways of the Washington region in general have received little academic attention from cultural and historical perspectives. Among the exceptions are Timothy Davis, who has written extensively on the federal parkways winding through the area's stream valleys, and Larry Van Dyne, whose detailed essays for the Washingtonian magazine together comprise probably the most thorough published treatment of Washington's suburbs and regional highway network.¹¹ In his master's thesis and in a subsequent article, Leland White studied in

includes no scholarly apparatus to facilitate further research. Frederic M. Miller's and Gillette's Washington Seen: A Photographic History, 1875-1965 (Baltimore: Johns Hopkins University Press, 1995) emphasizes in its epilogue suburban development and some of the Beltway's effects, but only to 1965.

¹⁰ For representative examples, see Jane Sween, Montgomery County: Two Centuries of Change (Woodland Hills, Ca.: Windsor, 1984), and Alan Virta, Prince George's County: A Pictorial History (Norfolk, Va.: Donning, 1984).

¹¹ Timothy Mark Davis, "Mount Vernon Memorial Highway and the Evolution of the American Parkway," Ph.D. dissertation, University of Texas, 1997; Davis, "Rock Creek and Potomac Parkway, Washington, DC: The Evolution of a Contested Urban

depth the controversial history of Interstate 66, linking Washington with the Virginia suburbs to the west.¹² Two decades of citizen protests led to the 1973 cancellation of several key Interstate highways in Washington; a comprehensive study of those freeway battles has yet to appear, but partial coverage is provided by Howard Gillette Jr. and by Jane Freundel Levey and Bob Levey.¹³

Except for White's study of I-66, most of this work has concentrated on highways within or very close to the city of Washington itself, as has most regional historical scholarship. And yet, as Van Dyne writes,

[t]he District of Columbia—for all its status as national capital with its museums and theaters, its grand Mall and somber memorials—has long ceased to be the place where most Washingtonians live. The 'burbs—so often held in low esteem by university professors and novelists—are where most members of the middle class live, either by preference or because it's the best option they can afford.¹⁴

As of 2000, Van Dyne notes, almost 90 percent of the 4.6 million residents of the Washington metropolitan region lived, and nearly all of the region's Fortune 500 firms were located, outside the city, both strong measures of suburban ascendancy.¹⁵

Landscape," Studies in the History of Gardens and Designed Landscapes 19.2 (Summer 1999): 123-237; Van Dyne, "Getting There," 122-129, 201-211. Sara Amy Leach has also published a shorter article on the federal parkways; see Leach, "Fifty Years of Parkway Construction in and around the Nation's Capital," in Roadside America: The Automobile in Design and Culture, ed. Jan Jennings (Ames, Ia.: Iowa State University Press, 1990), 185-197.

¹² Leland J. White, "Dividing Highway: Citizen Activism and Interstate 66 in Arlington, Virginia," Washington History 13.1 (Spring/Summer 2001): 52-67.

¹³ Howard Gillette, Jr., "A National Workshop for Urban Policy: The Metropolitanization of Washington, 1946-1968," The Public Historian 7.1 (Winter 1985): 15-27.; Bob Levey and Jane Freundel Levey, "End of the Roads," Washington Post Magazine, 26 November 2000: 10-17, 24-26. I have also written several unpublished papers on the freeway protests, housed in the Community Archives at the Washingtoniana Division of the D.C. Public Library.

¹⁴ Larry Van Dyne, "As Far As The Eye Can See," Washingtonian, February 2000: 61.

But academic study of cultural and historic Washington stubbornly lingers in an earlier age in which the city did dominate the region in many ways. This framework was once a reality: into the late 1940s, the District of Columbia continued to absorb at least as many residents as did the suburbs, and the prospect of business decentralization was laughed off.¹⁶ The failure to acknowledge the suburbs' contemporary role relative to the city of Washington is one reason for the absence of the Capital Beltway from Washington scholarship. Another is that the Beltway is just a road, and not a very likable one, as journalist Paul Dickson writes:

Not many people love or even much like the Capital Beltway, because it is a sterile, high-speed, often nightmarish convenience, an endless exit ramp without the seedy, carnival-like atmosphere of, say, Route 1 or the scenic charm of a Rock Creek Parkway or Skyline Drive. Nor does it have the romance of a former Indian trail or overland stage route. It was born in [the twentieth] century as a bypass around Washington to speed those to the north of us to destinations to the south of us and vice-versa. Some people hate it outright, though others find it's something they've become accustomed to but have little affection for, like overshoes.¹⁷

A Greenbelt resident explains that

the Beltway doesn't go anywhere . . . it's very utilitarian. [Y]ou wouldn't get a song like Route 66 about the beltway—you know what I mean? [A]nd there's the whole lack of road art, cheap hotels, and diners that other highways have . . . driving the beltway is like driving through the middle of your living room.¹⁸

¹⁵ Ibid., 61-62.

¹⁶ Gillette, "A National Workshop," 8-9.

¹⁷ Paul Dickson, "Capital Beltway: The Medium and the Message," Evening Star and News Sunday Magazine, 10 June 1973: 10.

¹⁸ Beltway Survey #189. More detailed discussions of this survey and its numbering scheme appear in Chapters 2 and 8.

The Beltway is, indeed, gritty, and does not have the nostalgic draw of the Route 1s and Route 66s which inspire their own fan clubs. "It is unlikely," one journalist writes of the entire I-95 corridor, including the Beltway, "that anyone will ever care to preserve a piece of I-95 for a museum, as the Smithsonian Institution did . . . with a stretch of the old Route 66."¹⁹ But such comparisons miss the point: even purely utilitarian roads can be culturally and historically significant.

Geographer John Brinckerhoff Jackson made this last point in his published essays. However, he did not explain clearly how such roads are significant, or how their significance might be studied. My study, therefore, is inspired by two gaps in scholarship. The first is a gap in content: for reasons including the ones covered earlier, neither Washington nor Maryland nor Virginia scholarship substantively addresses the role of the Beltway in the region's social, cultural, political, and economic framework. The second inspiration is a gap in theory and method relative to roads. In short, Jackson made a convincing case for the cultural study of roads, but chose not to answer the most obvious follow-up question: how do you do that?

What is odology? Building toward a study model

J.B. Jackson (1902-1996), a maverick geographer and founder of the journal Landscape, has for decades been widely quoted on myriad aspects of the study of the American landscape. But through his career he was notoriously vague and loose with his assertions and suggestions—probably intentionally so, given his anti-academic

¹⁹ Randy Kennedy, "I-95, A River of Commerce Overflowing With Traffic," New York Times, 29 December 2000: B6.

streak.²⁰ I have not been alone in my frustration that, in his decades' worth of articles and books exhorting readers to recognize the significance of the landscape and to go out and study it, Jackson rarely spelled out how he expected his readers to do it. This was the case both for general landscape study and for specialized study of its components, including its roads.

I began to address the first of these lacunae—how to study the American cultural landscape in general—in 1995, by developing an interdisciplinary fieldwork model (drawing heavily on Jackson's own work) which served as the foundation of my master's thesis in 1996 and was published separately in 1997.²¹ In subsequent years, I have significantly expanded the study model based on further research and on feedback from several conference presentations. A revised version of that theoretical and methodological framework informs this study of the Capital Beltway, and is introduced in the next chapter and presented in detail in the appendix.²²

²⁰ Patricia Nelson Limerick catalogs some of these quirks and idiosyncrasies in "J.B. Jackson and the Play of the Mind: Inquiry and Assertion as Contact Sports," Geographical Review 88.4 (October 1998): 483-491. A more extensive discussion of Jackson's approach to landscape study appears in Helen Lefkowitz Horowitz, "J.B. Jackson and the Discovery of the American Landscape," in John Brinkerhoff Jackson, Landscape in Sight: Looking at America, ed. Helen Lefkowitz Horowitz (New Haven: Yale University Press, 1997), ix-xxxi.

²¹ Jeremy L. Korr, "Cultural Landscapes in Material Culture Studies," M.A. thesis, University of Maryland at College Park, 1996; Jeremy L. Korr, "A Proposed Model for Cultural Landscape Study," Material Culture 29.3 (Fall 1997): 1-18. Earlier versions of this fieldwork model were presented to the New England Antiquities Research Association (1996), the University of New Mexico's conference on J.B. Jackson and the American Landscape (1998), the Great Lakes American Studies Association (2000), and the American Studies Association (2000). Portions of the model which have appeared in Material Culture are reprinted here with permission of the editor.

²² I am indebted to Mary Corbin Sies for her comments and critique through multiple drafts of this fieldwork model. For their suggestions and feedback, I am also grateful to John Caughey, Virginia Beauchamp, Kelly Quinn, David Silver, Ann Denkler,

The second of Jackson's gaps is harder to fill. At least for cultural landscape study, a number of scholars had offered their own ideas for study methods, so that I had a starting point for developing my own fieldwork model. This is less the case for the cultural study of roads, or what Jackson calls odology. As usual, in this context Jackson excites the reader, establishes the sense that there is much more to be learned, then ends his thoughts abruptly and runs off to his next topic. Here is his definition and prognosis for this line of scholarly inquiry:

Odology is the science or study of roads or journeys and, by extension, the study of streets and superhighways and trails and paths, how they are used, where they lead, and how they come into existence. Odology is part geography, part planning, and part engineering—engineering as in construction, and unhappily as in social construction as well. That is why the discipline has a brilliant future.²³

Roads, Jackson explains elsewhere in the same essay, have a double identity: they are instruments of movement, enabling transportation between places, but they are also distinct places in and of themselves. Thinking about a road in odological terms, he adds, means considering the road's functions, its impacts on the landscape around it, and—intriguingly—its subversive impact: "[T]he road is a very powerful space; and unless it is handled very carefully and constantly watched, it can undermine and destroy

Margaret Enloe Vivian, Susan Trail, Bruce Johansen, Mike Lucas, Erin Benedict, Sandor Vegh, Jennifer Bixler, Edwin Martini, Sarah Dangelas, Donald Snyder, Claudia Rector, Jane Dusselier, Jennifer Stabler, Nicole King, Linda Borish, Noel Sturgeon, Sherry Linkon, and the many others who have generously shared their insights with me while applying various iterations of this fieldwork model to their own case studies. For an example of an extensive application of my study model, see Margaret M.G. Enloe, "From Watermen to Waterviews . . . From Tilghman Packing Company to Tilghman on Chesapeake: A Cultural Landscape Study of Avalon Island, Chesapeake Bay," M.A. thesis, University of Maryland, College Park, 2000, esp. 17-20.

²³ John Brinckerhoff Jackson, "Roads Belong in the Landscape," in A Sense of Place, A Sense of Time (New Haven: Yale University Press, 1994), 191.

the existing order."²⁴ That is all. Other than some pontifications on the effects of recent innovations in road-building and traffic management and a rambling discursion on the ancient history of roads, this constitutes Jackson's explicit analytical framework for the cultural study of roads. But his suggestions, however sparse, are still substantive and unique enough to drive a distinct approach to roads and highways. The challenge of how to study roads from this perspective, and the successes and limitations of the ways in which a handful of road studies have attempted to do it, inform this study of the Beltway. Along the way, I will also offer suggestions about what future work in odology might comprise.

Odologies can be defined as studies of roads from some combination of cultural and/or historic perspective. Several American Studies scholars and cultural geographers have published such studies of American highways. From a quick overview of their work, I will point out which elements of their analytical techniques seem most useful for my own study, and what additional avenues of inquiry I can add.²⁵ Among these

²⁴ Ibid., 190; Jackson, A Sense of Place, A Sense of Time, 6.

²⁵ Among these scholars, Tim Davis is the only one to explicitly use Jackson's term "odology" and to suggest ways for extending Jackson's suggestions. In his abstract for a 1998 conference paper, which to date is the only scholarly assessment of Jackson's contribution to odology, Davis summarizes the geographer's work in that area:

J.B. Jackson's reputation as the father of landscape studies rests in no small measure on his original and insightful interpretations of the American highway. While most contemporary writers condemned the roadside landscape and decried the highway's influence on American culture, Jackson sought to understand the highway on its own terms, to contextualize the modern motorway and its attendant culture of mobility within broader social and historical patterns, and to explain why Americans used and shaped highway landscapes in ways that did not accord with elite conceptions of social and aesthetic propriety. Jackson's writings on the American highway inspired many scholars, designers, and popular writers to follow in his tracks. His essays, editorial influence, and personal encouragement played a crucial role in the

studies, Angus Kress Gillespie and Michael Aaron Rockland go furthest in suggesting what an odology might look like when generated from an American Studies approach. Their goal is a general cultural analysis of the New Jersey Turnpike's functions as a cultural icon on regional and national levels: "Despite our attempts to discover larger meanings for the Turnpike—the ideas and values of which it is emblematic—the New Jersey Turnpike is also, of course, just there, part of the landscape, and we try to describe it accurately, capture its flavor, and discuss what makes it unique among roads."²⁶ To that end, they combine approaches from American Studies, history, highway engineering, transportation planning, ethnography, and occupational folklore; together, these result in a purposefully segmented work in which certain chapters are heavily descriptive and experiential, while others are more analytical and evaluative. The authors' ethnographic/folkloric approach—based on interviews with local and out-of-state drivers, toll collectors, police, tow truck drivers, administrators, and others—distinguishes their work from others which emphasize engineering, roadside architecture, or politics. The thoughtful application of a variety of complementary methods is the key which positions their monograph as a work of American Studies, more so than Timothy Davis's dissertation on the Mount Vernon Memorial Highway, an

development of "odology" (his own term for the study of roads) into a respectable scholarly field and an increasingly popular literary and journalistic endeavor. (Tim Davis, "Looking Down the Road: Odology After J.B. Jackson," abstract of paper presented at the "J.B. Jackson and American Landscape" conference, University of New Mexico, School of Architecture and Planning, Albuquerque, N.M., October 1-4, 1998.)

²⁶ Gillespie and Rockland, xiii. The book remains the standard authority on the Turnpike even though the ethnographic research is over a decade old; see Scott Simon, interview with Michael Aaron Rockland, Weekend Edition Saturday, National Public Radio, 15 January 2000 <<http://www.npr.org/ramfiles/wesat/20000115.wesat.04.ram>>.

exceedingly thoroughly researched piece of scholarship but one grounded almost entirely in history, engineering, and landscape architecture.²⁷

The National Road (formerly in part U.S. 40, now in part I-70), the first road sponsored by the federal government, runs east-west between Maryland and Illinois. This highway has provided the basis for several other major works in odology, among which Thomas Schlereth's study is especially useful, as the author specifically designs his book as a model for the analysis of highways from a cultural approach. Clarifying this in his introduction, Schlereth, a professor of American Studies and history, promises to explain "how anyone can identify and interpret the extant physical evidence of the American road and roadside in a way that reveals much of its historical development and contemporary meaning."²⁸ Interspersed with his case study are general questions for road scholars, such as this sequence:

How has the road affected the environment? In what ways has the road had an impact on where we live? Is the road responsible for any new occupations among us? How has the road influenced our modes of recreation? What has the road meant to us as a place for civic celebration and as a symbol of our collective identity?²⁹

While Schlereth's actual analysis of the road is limited and does not fully answer his questions, the book itself still serves as a helpful framework for similar research.

Geographer Richard Schein's approach to Interstate 70 offers another useful model, with many detailed conceptual suggestions, on which to base a cultural highway analysis; his work is directly relevant to this study of the Capital Beltway because he

²⁷ Davis, Mount Vernon Memorial Highway.

²⁸ Thomas J. Schlereth, U.S. 40: A Roadscape of the American Experience (Indianapolis: Indiana Historical Society, 1985), vii.

²⁹ Ibid., 213.

takes an interstate highway as his object of analysis. Schein summarizes his proposed framework:

Explaining the interstate highway . . . requires extending one's viewpoint beyond the road itself, both figuratively and literally. Figuratively, a view beyond the road takes in the interstate's political and economic context and its place as a symbol of modern American life. Literally, an extended view places the interstate highway at the center of new American landscapes, reconfigurations of the built environment altering the spatial and visual arrangements of an earlier America.³⁰

Schein suggests several broader contexts within which to analyze an interstate highway's significance. For example, he addresses the ways by which the national spatial framework superimposed by the Interstate Highway System both affects and is reshaped by local inhabitants, arguing that "individual and collective response to the interstate's presence contributes to new spatial arrangements in daily life and new forms in the American cultural landscape."³¹ Schein's checklist of tensions inherent in interstates is particularly useful: local vs. national, place vs. placelessness, somewhere vs. nowhere, cultural diversity vs. cultural convergence, friend vs. stranger, tightly managed central control vs. individual freedom of movement, can all be identified to some extent in each of the interstate highways.

Other cultural studies of highways contribute additional suggestions for odological analysis. George R. Stewart's 1953 treatment of U.S. 40, which "inaugurated the serious study of automobile highways as historic landscapes," addresses the

³⁰ Richard S. Schein, "The Interstate 70 Landscape," in The National Road, ed. Karl Raitz (Baltimore: Johns Hopkins University Press, 1996), 321.

³¹ Ibid., 331.

importance of viewing roads as more than artifacts of engineering.³² Stewart points to the importance of what the highway means to the driver, how it is perceived with all senses, how it relates to both natural (fields, streams) and artifactual (utility wires, billboards, beer cans) landscape elements, and who used it under what circumstances.³³ Despite frequent subjective critique of the landscape and uneven attention to human history (in the East) and landscape features (in the West), Stewart's book remains a fascinating and pioneering cultural highway study, as does Thomas R. Vale and Geraldine R. Vale's sequel evaluating changes in the highway over the subsequent 30 years.³⁴

Drake Hokanson's study of the Lincoln Highway, the first pre-interstate transcontinental highway, emphasizes both the highway's role in educating Americans on the possibilities of long-distance automotive travel, and the individuals who developed and used the highway during its heyday.³⁵ His work is a helpful model for integrating national contexts with analysis of a single highway, and for incorporating diverse reference sources for a highway into a cohesive narrative. Taking a different approach, Bruce Radde's examination of Connecticut's Merritt Parkway emphasizes, and in fact overemphasizes, the planning and architectural sides of the parkway: fully

³² Jeffrey L. Durbin, review of The National Road, ed. Karl Raitz, Material Culture 29.3 (Fall 1997): 45.

³³ George R. Stewart, U.S. 40: Cross Section of the United States of America (Cambridge, Mass.: Riverside Press, 1953).

³⁴ Thomas R. Vale and Geraldine R. Vale, U.S. 40 Today: Thirty Years of Landscape Change in America (Madison, Wisc.: University of Wisconsin Press, 1983).

³⁵ Drake Hokanson, The Lincoln Highway: Main Street Across America (Iowa City: University of Iowa Press, 1988).

one-fifth of the book is devoted to George Dunkelberger's 68 unique bridges crossing the Merritt.³⁶ While Radde's discussion of the road's design offers a model for incorporating that approach into a more multifaceted highway analysis, his minimal concern for the parkway's impacts (land use, economic, social) and for scholarly analysis more generally makes this work less useful than it might be as a model for other highway study.

On the opposite side of the pendulum, a collection of books on U.S. 66 approach the Mother Road from a social history perspective. Relying heavily on over 200 personal interviews, Quinta Scott and Susan Croce Kelly aim "to describe the history of U.S. 66 and to show its role in their lives and some of the major events of America's twentieth century."³⁷ Scott and Kelly draw also from a wide variety of books, journal and magazine articles, newspapers, archival collections, and maps. Michael Wallis does the same in his work, but while Scott and Kelly also bring in an architectural history approach, Wallis evaluates the highway almost entirely as a social institution.³⁸

Together, these highway studies have many analytical suggestions to offer. They have several shortcomings as well, which make some of them less useful as models for a study of a contemporary, everyday highway like the Capital Beltway. For one, most of these studies examine roads created eighty years ago or more; only the New Jersey Turnpike, in Gillespie's and Rockland's book, was designed during the same period (and, as Chapter 4 describes, by some of the same people) as the Capital Beltway. Most

³⁶ Bruce Radde, The Merritt Parkway (New Haven: Yale University Press, 1993).

³⁷ Scott and Kelly, Route 66: The Highway and Its People, xiv. See also Quinta Scott, Along Route 66 (Norman, Ok.: University of Oklahoma Press, 2000).

³⁸ Wallis, Route 66: The Mother Road.

of the odologies do not treat their highways as living phenomena: Scott and Kelly study how Route 66 once was, not how it currently is. Similarly, all but the two U.S. 66 books and the New Jersey Turnpike study are missing, entirely or to a large extent, the voices of the individuals whose lives intertwined with the highways; instead, the other works focus on planning, engineering, architecture, or landscape design. Issues of power and access, too, are rarely addressed; Gillespie and Rockland go into great detail about who can and cannot take advantage of the New Jersey Turnpike, who has had a voice in the planning process, and what the implications are, but most of the studies are silent on these issues.

There are several elements of these previous studies which I believe are critical to the odological approach as introduced by J.B. Jackson. The ethnographic component—Gillespie and Rockland's and Scott and Kelly's incorporation of individuals' voices in an attempt to understand what the road means to them—is one, especially in the study of a contemporary road for which live informants exist. Stewart's emphasis on studying the nature and artifacts of a roadscape, not just the road itself, is consistent with my cultural landscape study model, detailed in Chapter 2. Similarly, Gillespie and Rockland's dual approach to the New Jersey Turnpike as both a physical artifact and a social institution is a reminder that every highway can be viewed both by itself (as a product of a complex engineering and design process) and in a constant dialectic relationship with the people who use and maintain it. That dialectic, too, plays an integral role in my landscape fieldwork model.

Guiding Questions

A variety of specific points from the published highway studies lead directly to the five questions which guide this analysis of the Capital Beltway and which structure my own odology framework. First, drawing on Thomas Schlereth's attempt to understand the contemporary meanings of I-70 and Andrew Gillespie and Michael Rockland's efforts to "discover larger meanings for the [New Jersey] Turnpike—the ideas and values of which it is emblematic," I approach roads as value-laden landscapes whose underlying beliefs and assumptions can be analyzed.³⁹ Geographer Karl Raitz writes: "Both in the selection of its character—direction, destination, capacity, and visual qualities, among many others—and in the manner in which people choose to represent it, the landscape of the road captures and mediates social and political relationships of the human world." Quoting Baudrillard, Raitz adds that "the road is a trope for social and economic life in the United States; it reflects what Americans hold to be important and central to our being."⁴⁰

But the road is not merely representative; it is not simply a mirror of American beliefs. Material culture studies theory posits a dialectic relationship between humans and artifacts, and in this way roads and society affect each other reciprocally. While Americans' values and priorities shape the roads, those roads dictate residential patterns, commercial development, and history.⁴¹ In her study of nineteenth-century Nevada roads, Margaret Purser summarizes this point succinctly:

³⁹ Gillespie and Rockland, 3.

⁴⁰ Karl Raitz, "American Roads, Roadside America," Geographical Review 88.3 (July 1998): 363-4.

⁴¹ Schlereth, 1.

In the end, roads do not act; people do. But where roads go, and how they do or do not link place to place, does shape the lives of the individuals and communities that use them. People, in turn, continue to build and use roads. The relationship is not determinative in any finite sense, but continuous and interactive.⁴²

With this dynamic in mind, and using the Capital Beltway as a case study, my first question is: What beliefs and values does the Beltway reveal and create? How does the Beltway shape the lives of the individuals and communities that use it, and how do people in turn influence the Beltway?

Second, Gillespie and Rockland discuss in their text how issues of power and access have influenced the development of the New Jersey Turnpike. In the case of the Turnpike, questions of access have arisen not only in terms of planning (e.g., to what extent do abutters have a voice in the planning process) but for circumstances as mundane as flat tires and scenic views. Running a private road, the New Jersey Turnpike Authority can invite whom it pleases, and its invitation list excludes AAA, whose tow trucks are banned from the turnpike, and all cameras (thus the absence of photos from Gillespie and Rockland's book, and their description of the arrest and confinement by state police of a bewildered driver for taking a photograph on the turnpike).

Most roads do not go that far in terms of exclusion. But all are, to some extent, instruments of power; and access to their creation, maintenance, and use has significant societal implications. As noted earlier, J.B. Jackson argues that subversive use of

⁴² Margaret Purser, "All Roads Lead to Winnemucca: Local Road Systems and Community Material Culture in Nineteenth-Century Nevada," in Perspectives in Vernacular Architecture, III, ed. Thomas Carter and Bernard L. Herman (Columbia, Mo.: University of Missouri Press, 1989), 134.

roads—or even non-subversive—can "undermine and destroy the existing order," one reason why Congress is specifically proscribed from building roads.⁴³ In this sense, the road, or at least the public road, may be considered a state project; Raitz suggests giving explicit attention to "the role the road and the roadside may play in reinforcing or transforming . . . narratives of nationhood."⁴⁴

Access to the nation's roads empowers those with vehicles and/or money who can use them; for others, without such access, the roads enforce a stigmatized isolation from the national culture, economy, and even identity.⁴⁵ Contrary to its representation in the media, for example, the Beltway does not help everyone. Multiple segments of the Washington area's population cannot or will not use the Beltway, because of factors including their income, age, and feelings toward the road (e.g., deep fright). When area governments put resources into the Beltway and other roads, those resources are not available for other modes of transportation which both the Beltway's users and non-users could access. So although roads serve as a common experience for all Americans by affecting their lives in some way, different people are influenced by the road system in very different ways. Thus my second question: What dynamics of power and access relate to the Beltway? Who controls or has access to the road and its planning and alterations, and with what implications and consequences?

⁴³ Jackson, A Sense of Place, A Sense of Time, 6.

⁴⁴ Raitz, "American Roads," 365. I will discuss this issue further in Chapter 4.

⁴⁵ Karl Raitz, "Introduction: The National Road and Its Landscapes," in A Guide to the National Road, ed. Karl Raitz (Baltimore: Johns Hopkins University Press, 1996), 7, 14; Grady Clay and Karl Raitz, "Never a Stationary Highway," in The National Road, ed. Karl Raitz (Baltimore: Johns Hopkins University Press, 1996), 351-354; John R. Stilgoe, Outside Lies Magic: Regaining History and Awareness in Everyday Places (New York: Walker, 1998), 89-95.

Third, as noted above, Drake Hokanson explains in his study how the Lincoln Highway, the first transcontinental road, re-educated Americans to think in a different way about the possibilities of long-distance travel. Hokanson opens the door to a broader question: in what other ways can roads either encourage people to challenge their assumptions (as in his study) or to develop and/or reinforce those assumptions in the first place? This line of inquiry dovetails with current projects in several fields of study, each of which attempts to identify and interrogate accepted conventions for the ways in which some societal phenomenon functions. In American Studies and cultural studies, this effort is usually articulated in terms of challenges to naturalized (what is generally accepted as "normal") conventions of race (white), gender (male), sexuality (hetero), and other categories of identity. In the environmental justice and New Urbanism movements, both more obviously related to transportation issues, the challenge is to commonly accepted understandings of transportation planning (e.g., strong emphasis on automobile travel) and land use.⁴⁶

This type of questioning seeks to identify how assumptions developed and what other possibilities exist. While current transportation networks, for example, generally are set up with the key goal of establishing efficient traffic flow for motor vehicles, Jackson notes that other structures are possible, once observers stop taking their assumptions for granted.⁴⁷ Clay McShane points out that for centuries roads functioned

⁴⁶ On the relationship between environmental justice and transportation, see, for example, Just Transportation: Dismantling Race and Class Barriers to Mobility, ed. Robert D. Bullard and Glenn S. Johnson (Gabriola Island, B.C.: New Society Publishers, 1997). Bullard and Johnson offer a variety of examples, including freeways which, as in Los Angeles, "isolate, segregate, separate, and trap the poorest of residents in polluted 'poverty pockets'" (18).

⁴⁷ Jackson, "Roads," 192.

primarily as public, communal sites for recreation and social gatherings; only after twentieth-century engineers and suburbanites refocused the street's purpose did its primary responsibility become to move traffic efficiently.⁴⁸ Odology can be a vehicle for exploring this and other assumptions of the American road and transportation network. The Beltway, in fact, is tailor-made for it:

Perhaps because it rings Congress and its shortcomings are so visible to those in power, the Beltway has become the most examined and questioned piece of the interstate system, and problems which have national significance were first brought into focus by critics of the Beltway. It became a symbol for highway oversight and challengeable assumptions [emphasis added].⁴⁹

The third question: What assumptions (or "normativities") does the Beltway reflect and create; how does it contribute to a social world which seems "normal"? Through what process did those assumptions take hold? In what ways have they been challenged? What ramifications result from this?

Fourth, in his analysis of I-70, Richard Schein argues that interstates are fraught with tensions, ranging from the local vs. national dynamic to tightly managed central control vs. individual freedom of movement. Any interstate, then, can be expected to harbor some variations of consensus and of conflict. Certainly, as we shall see, the local vs. national tension plays out in the case of the Capital Beltway, but even stronger is the tension between unity and division: the highway literally bridges two states (and a federal district), and must by definition bring them together even as its strings are being pulled by separate administrations with drastically different planning philosophies.

⁴⁸ Clay McShane, Down the Asphalt Path: The Automobile and the American City (New York: Columbia University Press, 1994), 57-64.

⁴⁹ Dickson, 15.

The challenge here is to the promise contained in the Beltway's inaugural address, delivered by Federal Highway Administrator Rex M. Whitton, proclaiming that "Interstate 495 is . . . a huge wedding ring for the metropolitan area, uniting all of its suburbs. . . . Here on this Beltway we have seen cooperation between levels of government at its best."⁵⁰ Has the Beltway indeed functioned as a unifying device and a symbol of governmental cooperation? As to Whitton's wedding ring, the Beltway had been opened less than two years before the AAA convened a "Beltway Forum" at the Smithsonian's Museum of Natural History to address the question "Golden Ring or Vicious Circle?"⁵¹ After years of increasing traffic, Whitton's promise was not forgotten; in 1989 an AAA spokesperson said that "[t]he road that was heralded as a wedding ring around Washington is now 25 years old, and a lot of us want a divorce."⁵²

Nor did the Beltway so easily bring together the governments of multiple jurisdictions, as Whitton intimated in 1964. In 1973, for example, President Richard Nixon proposed a national 50 mile per hour speed limit as an energy-saving measure. At the time, the Beltway's Woodrow Wilson Bridge was posted at 60 miles per hour. But the bridge ran through three area jurisdictions, each of which had a separate plan: Virginia, whose governor had rejected Nixon's proposal and imposed a statewide limit of 55 miles per hour, planned to post its section of bridge at 55; Maryland planned to

⁵⁰ Rex M. Whitton, "The Minus-Ten-Minute Road: Remarks by Rex M. Whitton, Federal Highway Administrator, Bureau of Public Roads, U.S. Department of Commerce, at the dedication of the Maryland section of the Capital Beltway, Interstate Route 495, August 17, 1964," typescript, photocopy in possession of the author.

⁵¹ "Capital Beltway: Golden Ring or Vicious Circle?" Fairfax City Times, 19 November 1965: 3.

⁵² Greg Henderson, "What Has Lines That Show, Is Only 25 Yrs. Old and People Run Over It?" Northern Virginia Sun, 17 August 1989: 1.

impose a 50 miles per hour limit; Washington planned for 45; and none of the three wanted to compromise.⁵³ Similar tensions and necessitated compromises have accompanied the Beltway since long before it opened to traffic. The fourth question addresses these and other tensions: In relation to the social systems it affects, in what ways does the Capital Beltway function as an arena of consensus and of conflict, of unity and of division?

Finally, in his pioneering study of U.S. 40, George Stewart highlights the importance of what the National Road meant to the people using it. To study the New Jersey Turnpike, Gillespie and Rockland adopt Stewart's approach and expand it to include the roles the turnpike played in the lives of its designers, administrators, toll collectors, police, and neighbors. This perspective recognizes—as most of the highway studies cited above do not—that roads play integral parts in individuals' lives, and in fact contribute to structuring people's thoughts and decisions. The focus here is not on the physical construction of the road, which can be understood by studying its planning and engineering, but on its social construction, or how the road exists in the minds of the people whose lives intertwine with it.

Among the 607 individuals who responded to a survey I conducted as part of this study, discussed in greater detail in Chapters 2 and 8, many commented that the Beltway was extremely dangerous, that "everything costs more inside," or that the crime rate is higher inside the Beltway.⁵⁴ Whether or not these assertions are statistically accurate, they are true within the individual worlds of the people who believe them. It is

⁵³ Paul Hodge and Helen Dewar, "Energy Moves Draw Mixed Reaction: Virginia Speed Limit Set at 55 m.p.h.," Washington Post, 27 November 1973: A1.

⁵⁴ Beltway Survey #543.

still important, certainly, to assess the accuracy and significance of this type of claim, just as it is to understand the physical construction of a highway and its ramifications. At the same time, the social construction of the road—what it means in the minds of the people associated with it—should not be discounted, because it is that version of the road, as well as its physical iteration, which drives individuals' emotions and decisions. The fifth question addresses this social construction: How is the Beltway perceived and experienced by the individuals whose lives intertwine with it? How has it influenced their lives and identities, and how have they, in turn, influenced the Beltway?

These are the five central questions which I developed and kept in mind when beginning my study, to help me analyze the Beltway from an odological approach. However, as my research progressed, I realized that a sixth question was equally important. In ethnographic case studies, researchers interact with specific sets of people and learn about their beliefs, values, and concerns, which by definition cannot be fully anticipated. The researchers then are able to address and analyze these previously unidentified questions and issues which are important to their informants. (I discuss ethnographic method in further detail in the next chapter.)

During the course of my study, it became apparent that the people I was interviewing and the respondents filling out my Web survey were not especially concerned about the same issues I was, the ones addressed in the five questions above. Instead, what they wanted to know, over and over, was why the traffic on the Beltway is so abysmal, and what I could suggest for improving the situation. At first I explained politely that this was not the question I was looking to answer. But after seeing that this concern was shared by the different groups I studied—commuters, truckers, police, fire

and rescue crews, planners—I realized this question was not incidental, and is important to address in order to more fully understand how people perceive the Beltway and incorporate it into their daily decisions. Drawing on my informants' concerns, then, I ask this unanticipated sixth question: Why is traffic on the Capital Beltway so bad, and what can be done for improvement?

Each of the six approaches represented by these questions guides at least one of the odologies discussed earlier—Gillespie's and Rockland's study of the New Jersey Turnpike incorporates informants' concerns in a way similar to what I have done with my sixth question—but no single study includes all six. In this study, I bring them together for a single highway, a road which has almost subversively reshaped the lives and thoughts of so many individuals, and "which not only has become firmly entrenched in the Washington area [and national] lexicon . . . it has become an infamous—and unavoidable—part of Washington area life."⁵⁵

Organization

My study is divided into ten chapters, some of which are heavily historical and descriptive while others are much more experiential and analytical. Here in Chapter 1, I have introduced the guiding questions and theoretical frameworks underlying this dissertation, and explained my approach to odology. Chapter 2, "'Most of Those Involved . . . Are Dead': Selection and Implementation of Study Methods," goes into

⁵⁵ Sue Anne Pressley, "The Beltway: Region's Main Street, Main Pain," Washington Post, 14 March 1986: A1.

further detail about my research tools, including cultural landscape analysis, documentary analysis, ethnography, and Web surveys.

Chapter 3, "'There Was Just No Easy Way to Get Anywhere': Washington's Transportation in the 1950s," sets the scene for the creation of the Capital Beltway. Looking first nationally and then regionally, I discuss the origin of circumferential highways and examine how the Beltway fit into both the developing Interstate Highway System and the Washington metropolitan transportation network. Drawing on responses from the Web survey, I look at how some Washington area residents traveled around the region before the Beltway, and how their options then structured their lives in ways different from how the Beltway would later change them.

In Chapter 4, "'A Huge Wedding Ring for the Metropolitan Area': The Coming of the Capital Beltway," I provide the first in-depth discussion of the Beltway's development and construction in Maryland and Virginia. Using my interviews with ten of its original engineers, survey responses from residents who watched the highway's development, and primary documentary sources, I examine the planning and building of the Beltway from 1952 to 1964.

Chapter 5, "'This Was a Nice Place': Conflict and Anger," concentrates on the conflicts and the perceived inequities created by the Beltway's construction, which until now have received virtually no attention. Through case examinations of Cabin John, Silver Spring, and especially Rock Creek Park, I show how the Beltway divided some neighbors and communities even as it brought others together. I use selections from personal interviews and survey responses to highlight the magnitude of the Beltway's

negative impact on certain individuals' lives, and contrast these with the positive assessments discussed in Chapter 4.

Chapter 4, "A Huge Wedding Ring," explains how Maryland and Virginia each built a distinct road which connected in a ring, and Chapter 5, "This Was a Nice Place," focuses on the conflicts and frustrations which individual area residents felt about different aspects of the Beltway. In Chapter 6, "'I Am Being Raped by VDOT': Virginia's and Maryland's Struggle for Consensus," I turn to the transportation planning process to examine how both states have tried to address both of these dynamics, how they attempt to reach consensus with each other and with their own residents. I bring the reader into the world of contemporary Beltway planning and show how Maryland's State Highway Administration and Virginia's Department of Transportation currently bring the public into their development processes, as well as how they attempt, and with what degree of success, to coordinate with each other. By applying detailed rhetorical analysis to a public presentation given by a VDOT official, I explain how Virginia residents in particular continue to feel excluded from the transportation planning process even though officials correctly—in a way—believe they are allowing residents to participate in unprecedented ways.

Moving to the highway itself, Chapter 7, "'A Deer Doesn't Stand a Chance': Good Calls, Bad Calls, 10-45s, and the Physical World of I-495," examines the road in its identity as a physical artifact. Drawing on my cultural landscape study model, personal interviews, and survey responses, I explore how the intersection of the three components of a landscape (nature, artifacts, and humans) characterize the Beltway. I

conclude by looking carefully for absences—for who does not have access to the Beltway—and the ramifications of those absences.

Chapter 8, "'The Beltway Alone Will Prevent Me From Returning': The Capital Beltway and/in Individual Lives," turns from the Beltway's physical to its social construction, and focuses on how individuals perceive the highway and how it influences and structures their thoughts and lives. This chapter draws the most heavily on the Web survey, for which I discuss the demographic breakdown.

In Chapter 9, "'Surrender Dorothy': Roles and Effects of the Beltway," I shift the emphasis on the Beltway's social construction to examine what roles it has played on a collective (rather than individual) level. I show how the Beltway has served in multiple ways as a venue of both community and conflict, as a template on which people can promote their values and beliefs, as a site of negotiation between public and private space, as a vehicle for creation and maintenance of regional identity, and as a site for mediation and compromise in inter-jurisdictional cooperation. I conclude with a brief overview of the Beltway's economic and political effects on the Washington area.

Chapter 10, "'What the Pave Meant': Coming Full Circle," brings the study to a close by reviewing my guiding questions, considering my answers and conclusions, and looking to the future. I also offer reflections on the effectiveness and limitations of my study methods, and suggest what remains to be done in the way of Beltway and odological research. Finally, I explain why neither I nor highway officials can solve the challenge more of my survey respondents raised than any other concern—how to ameliorate Beltway traffic—and reflect on what my response means for the people whose lives intersect with the Beltway.

CHAPTER 2

"MOST OF THOSE INVOLVED . . . ARE DEAD":

SELECTION AND IMPLEMENTATION OF STUDY METHODS

In beginning my research for this study, I expected to draw on previous work examining the Beltway's central role in the daily lives of Washington-area residents and its regional and national significance. I was surprised to discover that the road's effects have been largely unexplored. Through five years of research, no one I spoke with indicated having been approached for or having participated in a similar research project; in fact, some retired engineers were surprised and pleased that someone came to ask about their work for the first time in decades. Yet there have been a few attempts to go down this path before: Larry Van Dyne's articles for the Washingtonian magazine and George Grier's demographic analyses of the 1970s at least made a start, as has Yale undergraduate Rebecca Benefiel's work.⁵⁶ A more extensive and multifaceted study, though, has clearly been lacking.

There is, of course, a full shelf of traffic-oriented studies for the Beltway, but not much more than that. This paucity in part derives from the difficulties inherent in studying the Beltway, which I address below, but I believe it also speaks to the compartmentalization of knowledge in academia, which often discourages the study of complicated phenomena from more than a single discipline's established approach. To study the Capital Beltway from strictly a planning, engineering, architectural,

⁵⁶ Van Dyne, "Getting There;" Grier, "Washington"; Rebecca Benefiel, "Intention and Reality: The Planning of the Capital Beltway and its Impact on the Greater Washington Metropolitan Area, 1950-2000," unpublished paper, Yale University, December 2000. Cited with permission of the author.

geographic, historical, or sociological perspective, as other studies of beltways have done and which I summarize in Chapter 9, would be to miss much of its complexity. This project, in contrast, is explicitly an interdisciplinary work of American Studies.

In her 1988 presidential address to the American Studies Association, Linda Kerber argued that American Studies "is positioned well to move toward issues that by their nature do not settle well into traditional disciplines."⁵⁷ I believe that the Capital Beltway, understood as a cultural phenomenon, is such an "issue." Each of the approaches I incorporate in this study could function alone to guide research, and as such it might seem more appropriate to situate this work within a planning or a cultural geography context, for instance. But by grounding my research in American Studies, a field which encourages a careful selection of cross-disciplinary methodological and theoretical frameworks, I incorporate and apply useful approaches originating from several disciplines to understand more thoroughly the complexity of my object of study.

However, this is easier said than done. What does it mean to study a highway from an American Studies perspective? The only examples of such full-length studies are Gillespie and Rockland's analysis of the New Jersey Turnpike, which explicitly references American Studies figures such as John Kouwenhoven and Leo Marx, and Davis's work on the Mount Vernon Memorial Highway. Neither of these works addresses all the questions I have posed towards the Capital Beltway, leaving me to chart my own path. In this study, I combine approaches from cultural landscape analysis, documentary analysis, planning history, and ethnography to create a framework for studying a highway from an American Studies foundation.

⁵⁷ Linda K. Kerber, "Diversity and the Transformation of American Studies," American Quarterly 41 (1989): 425.

Cultural landscape analysis

Drawing on cultural geography, material culture studies, historical ecology, and other disciplines, cultural landscape analysis focuses on the dynamic relationships among the people, the objects, and the non-human natural components of a given site. In an odology context, this approach helped me think about roads in interdisciplinary terms, rather than in the terms of single fields (e.g., engineering or geography). This analytical approach also encouraged me to ask questions which explored the issues raised in the odology questions introduced in the last chapter, thus serving as a substantive and detailed study model for answering those broader and more abstract questions.

Since 1995, I have been developing and refining a fieldwork model for cultural landscape analysis. This examination of the Capital Beltway is an extensive case study testing and applying that model, and an example for other researchers interested in roads and other types of landscapes who may find this approach useful in their own analyses. The full fieldwork model includes five operations, each with several subheadings and with sets of study questions for guidance. The complete version of the model appears in Appendix A, and may be used to study a wide variety of cultural landscapes. Here in Chapter 2, I provide a basic outline of the operations and subheadings (Table 1), and note how I apply them to a highway landscape in the course of this study.

Table 1.---Cultural Landscape Fieldwork Model (2002 revision)

<u>Operation</u>	<u>Sub-operation</u>
1. Description of dimensions	a. Physical 1) Humans 2) Artifacts, and/or 3) Non-human natural components b. Multisensory c. Spiritual/sacred
2. Boundaries	a. Set in time and space b. Creators and alterers identified c. Experiential vs. abstract (if applicable) d. Social vs. political (if applicable)
3. Perceptions	a. Identify b. Aesthetics c. Cognitive landscapes d. Language and terminology e. Spatial relationships
4. Dynamic relationship	a. Humans as agents b. Nature as agent c. Artifacts as agents
5. Cultural analysis	a. Cultural context & significance evaluated b. Power and access dynamics 1) Competing meanings 2) Images and representation c. Identity analysis d. Absent components e. Variable survivability (if applicable) f. Technology g. Role of the researcher

The model's first operation, description of dimensions, introduces several complementary ways to think about and define a specific cultural landscape. First, the physical dimensions of a landscape include its humans, its artifacts (i.e., objects purposefully shaped by people), and its non-human natural components; the people can

further be divided into individuals physically present within a site and those who significantly influence it but occupy separate space. In this study, I carry out this step intermittently rather than in one self-contained section, by introducing components of the landscape as appropriate in different contexts. Over the course of Chapters 2 through 9, I discuss people associated with the Beltway including its designers, engineers, planners, neighbors, maintenance workers, police, and fire and rescue crews. I focus in Chapter 7 on the distinction between people inside and outside the landscape in separate analyses of police and emergency crews (inside) and traffic controllers (outside). Similarly, I discuss artifactual and non-human natural components throughout the study, but especially in Chapter 7 where I explore how they contribute to danger and safety.

Additional dimensions of a cultural landscape include its multisensory and its sacred qualities. While I look at the Beltway primarily in visual terms, I also address how it functions as a soundscape by discussing sound walls and neighbors' reactions to the Beltway's noise. I do not approach the highway in depth in terms of its sacred dimensions, though I do introduce in Chapter 9 the way in which a local church has appropriated the Beltway as a spiritual template. Analysis of this dimension may be more useful in studying other types of cultural landscapes.

The second operation focuses on defining boundaries. In this operation, the researcher sets boundaries for the site in terms of space and time; identifies creators and alterers to those boundaries; addresses whether the boundaries are experiential (determined and perceived through concrete experience) or abstract; and looks at whether they are social (defined by those within it) or political (defined from without).

This study covers the Beltway's first 50 years, beginning in 1952 with the first planning meetings in which the highway was seriously discussed, and concluding in 2001, the most recent full year of operation. I focus on the evolution of the highway's boundaries by studying how the road's original engineers and draftsmen created it, how its neighbors contributed to the process, and how later generations of planners and neighbors have tried to change the appearance and boundaries. In my detailed discussion of the Beltway's design and construction process, I focus on engineers and draftsmen who saw the highway either in abstract terms or in experiential ones, and on the circumstances underlying their respective approaches. I later address the distinction between the Beltway as a political versus a social boundary by examining the tension between local residents and outsiders over the term "inside the Beltway."

The third operation looks at people's perceptions of the cultural landscape. Steps within this operation encourage the researcher to identify varying perceptions of the landscape, issues of aesthetics and taste, cognitive landscapes (i.e., mental conceptions of landscapes perhaps differing from those sites' physical forms), language and terminology, and spatial relationships. By drawing on my Web survey and on face-to-face interviews, both of which I address later in this chapter, I introduce individuals' perceptions and cognitive versions of the Beltway throughout the study, but emphasize them most strongly in Chapter 8 in discussing how perceptions rather than specific events or statistics guide major decisions some people make with respect to the Beltway. In Chapter 7, I explore the Beltway's aesthetics in discussions of the highway's artifactual and non-human natural components, and look at the spatial relationships between the Beltway and its workers and users. I focus in detail on the exact language

used in discourse about the Beltway in my discussion of ongoing planning processes in Chapter 6, identifying the words and phrases used by engineers and by residents at public planning workshops, and analyzing the implications of those choices.

The fourth operation of the study model looks at the dynamic relationship among the physical components of the cultural landscape. How, this step asks, do the humans, the artifacts, and the non-human natural components of a site influence each other? Throughout this study, I address a variety of ways in which the Beltway's natural elements (e.g., topography, wildlife, precipitation), artifacts (e.g., bridges, signs, guardrails), and people (e.g., engineers, neighbors, police) have interacted with one another. I most thoroughly investigate these interactions in Chapter 7, which includes separate discussions of the agency, or influence, put forth by each group of components.

The fifth operation, cultural analysis, relates the cultural landscape to the social, political, economic, or cultural contexts surrounding it, and asks what ideologies, meaning systems, social systems, shared beliefs, and attitudes toward nature and people the landscape can help the researcher to understand. Subheadings in this operation suggest analyzing dynamics of power and access, competing meanings of a landscape, its images and representations, issues of identity (e.g., race, class, gender, sexuality), components absent from the landscape, variable survivability (i.e., components which may not be representative of larger patterns because they survive from earlier eras), technology, and the role of the researcher.

In this study, I preface my examination of the Beltway with discussion of the historical and cultural context surrounding its development; Chapter 3 looks at the history of beltways and the Interstate Highway System and at the state of transportation

in the Washington area in the 1950s. As the study progresses, I analyze the significance of my observations on an ongoing basis, with summation in the concluding chapter. I focus on issues of power, access, and contested meanings in discussions of the Beltway's neighbors and engineers and their respective roles and interactions in planning processes from 1959 to 2001, in Chapters 5 and 6. I look at representations of the Beltway in Chapter 9, emphasizing its differences in national and local discourse. In examining who does not have access to the Beltway and does not stand to benefit from it as strongly as others, I focus on both class issues and absent components in Chapter 7. My discussions of the original design process, in Chapter 4, and the constant replacement over time of objects (e.g., signs and guardrails) with modernized versions, in Chapter 7, speak to the role technology has played in the Beltway's development. Finally, later in this chapter I address in detail the dynamics associated with my position as researcher in this project.

Together, these five operations, which are described in greater detail in Appendix A, structure much of the substance of the study, although I do not perform them sequentially. As the study progresses, I relate certain observations and analyses back to this fieldwork model, and in Chapter 10, I offer some thoughts on which steps were particularly useful and which were not for this case study. This framework, however, suggests analyzing the contexts and components of cultural landscapes without offering specific methods for approaching those contexts or components. For complementary study methods, I turned to documentary analysis, planning history, ethnography, and Web surveys.

Documentary analysis and planning history

Roads, like other cultural artifacts and social institutions, generate written texts. Documentation relating to the Beltway includes such primary sources as planning materials and contemporary newspaper accounts as well as secondary sources including historical and geographic analyses. The documentary record, in conjunction with the landscape and with other sources I will discuss shortly, helps answer the questions I introduced in the odology and cultural landscape analysis frameworks.

However, although it is a prominent road, documentation for the Capital Beltway is remarkably difficult to track down, especially for its early years. The problem begins with its provenance: the Beltway has never had any central administrative authority. Various elements of its oversight have fallen to the federal government (the Bureau of Public Roads, later the Federal Highway Administration); the states of Maryland and Virginia; the District of Columbia; the City of Alexandria (Virginia); Fairfax (Va.), Prince George's (Md.), and Montgomery (Md.) Counties; and the National Capital Planning Commission (NCPC) and the Maryland-National Capital Park and Planning Commission (M-NCPPC).⁵⁸ But the Beltway's many tentacles do not translate into a wealth of reference material. Paul Dickson wrote in 1973 that

⁵⁸ Throughout this study, I refer regularly to the NCPC and the M-NCPPC, both of which are somewhat unique agencies. Here is a brief overview of each:

The Maryland General Assembly established the M-NCPPC in 1927 to perform planning and to administer parks in parts of Montgomery and Prince George's Counties. The agency's membership consists of five members apiece from the Montgomery County and Prince George's County Planning Boards. The M-NCPPC today has planning authority over most of the land area and population in both counties, and is

ironically, in a city dripping with statistics, there are none on the area's most important traffic artery. The Beltway has no central repository for information about itself. [AAA staffer Glenn] Lashley says, "You'd probably have to make 20 phone calls to all the various police departments and agencies which have a piece of the answer you want, and even then your information would probably be incomplete."⁵⁹

Nearly 30 years later, written records for the Beltway remain dispersed in many locations. In this study, I draw from the archives of the National Capital Planning Commission and the Maryland-National Capital Park & Planning Commission, the special collections in the Fenwick Library at George Mason University, the Marylandia and archives collection of the University of Maryland Libraries, the Virginia Room of the Fairfax County Public Library, the Maryland Room in the Hyattsville Branch of the Prince George's County Memorial Library system, and materials from the Virginia Department of Transportation's (VDOT's) reference collections. Unfortunately, my archival research revealed that both Maryland's State Highway Administration (SHA) and the M-NCPPC have in all likelihood discarded their written records pertinent to the Beltway's construction and early years (some M-NCPPC records may survive, but its

funded primarily by property taxes. See the Commission's home page, online, at <<http://www.mncppc.org/>>.

The NCPC is a federal agency which provides overall planning guidance for federal and District of Columbia government land and buildings in the National Capital Region, which includes all jurisdictions through which the Capital Beltway passes. The NCPC has separate responsibilities from the National Capital Region Transportation Planning Board (TPB) of the Metropolitan Washington Council of Governments (COG), which is the designated metropolitan planning organization for the Washington region and which I address in Chapter 9. NCPC members include key federal executive and congressional leaders, the D.C. mayor and the D.C. Council chair, and three appointees by the U.S. president and two by the D.C. mayor. The agency comments on non-federal projects that affect the federal presence in the Washington region, and facilitates consultation between state, local, and federal officials on plans for federal properties. See the NCPC's home page, online, at <<http://www.ncpc.gov/>>.

⁵⁹ Dickson, 16.

archive collection, uncatalogued and with closed stacks and extremely limited staffing, makes such determination almost impossible).

From the repositories above and others, the sources I use include books, journals, magazines, planning documents, highway maps and publicity materials, oral histories, brochures, songs, and poems. I draw extensively from the Washington Evening Star and Washington Post in large part because they are among the only area newspapers with long-running indexes available to the public.⁶⁰ In addition, Richard F. Weingroff of the Federal Highway Administration granted me access to his extensive vertical files which hold a variety of materials including brochures, maps, and newspaper clippings.

Documents from various stages of the Beltway's planning processes, from 1952 through 2001, comprise some of my key primary sources. Planning history helps me interpret the significance of these documents as well as the planning meetings I attended and which I describe in detail in Chapter 6. Here my thinking is informed by four avenues of research suggested by Mary Corbin Sies and Christopher Silver, who suggest the following approach to studying planning history: first, use interdisciplinary approaches to study specific episodes of planning development and implementation; second, uncover and analyze the beliefs and assumptions which have driven planners

⁶⁰ The Washington Post is indexed from 1971 onward in The Washington Post, Newspaper Index (Wooster, Oh.: Bell and Howell, 1971-1978), The Official Washington Post Index (Woodbridge, Conn.: Research Publications, 1979-1988), and Washington Post Index (Ann Arbor, Mich.: UMI, 1989-). Subject-based indexing is available for the Evening Star from 1852 through 1972; the index is a microfilmed set of index cards which constituted the Star's in-house reference system and which was donated to the D.C. Public Library after the Star folded in 1981. In addition, The Washington Times is indexed for several years in The Washington Times Index (Ann Arbor, Mich.: UMI, 1986-1993).

and policymakers; third, address the impact of planning and development initiatives on urban dwellers themselves, especially those marginalized from decision making processes; and fourth, study the built environment itself.⁶¹ In recent decades planners and planning historians have begun to study the social and cultural effects of highways from these directions, but to date these efforts have focused predominantly on inner-city freeways.⁶² My study extends this approach to include a suburban highway, the Beltway, and addresses Sies's and Silver's four points in the course of exploring the questions raised in the odology and cultural landscape study models.

Ethnography

Most of the works on roads which I discussed in Chapter 1 analyze highways of the past, and therefore rely heavily on written records. The contributors to Karl Raitz's anthology on the National Road, for example, could not ask nineteenth-century travelers about their thoughts and feelings; they were limited to drawing conclusions from surviving documentation. Because the Beltway is still a functioning highway, and because my study covers its operation in the very recent past, I had the opportunity to

⁶¹ Mary Corbin Sies and Christopher Silver, "Planning History and the New American Metropolis," in Planning the Twentieth-Century City, ed. Mary Corbin Sies and Christopher Silver (Baltimore: Johns Hopkins University Press, 1996), 450.

⁶² See, for example, Cliff Ellis, "Visions of Urban Freeways, 1930-1970," Ph.D. dissertation, University of California, Berkeley, 1990; Ellis, "Professional Conflict Over Urban Form: The Case of Urban Freeways, 1930 to 1970," in Planning the Twentieth-Century City, ed. Mary Corbin Sies and Christopher Silver (Baltimore: Johns Hopkins University Press, 1996), 262-279; and Raymond Mohl, "Race and Space in the Modern City: Interstate-95 and the Black Community in Miami," in Urban Policy in Twentieth-Century America, ed. Arnold Hirsch and Raymond Mohl (New Brunswick, N.J.: Rutgers University Press, 1993), 100-158.

use individuals as firsthand sources and to ask them directly how the Beltway affected their lives and what experiences they had with it. My informants' words complemented my written data and my observations of the landscape.

To collect and interpret contributions from live individuals, I incorporated elements of ethnography into my study. This mode of inquiry, developed within anthropology, seeks to understand the meaning systems and worldviews of distinct sets of people (defined by ethnicity, religion, avocation, or other common denominator) through participant observation and interviewing, in which the researcher spends extensive time interacting with group members, thus simultaneously observing and participating in their everyday lives. Here, my cultural set comprises numerous different individuals whose lives have in some way intertwined with the Capital Beltway, a broad and loosely-defined cluster. In this study, I use visits to the field, 44 face-to-face and phone interviews with 54 people, and 607 Web survey responses, as cyberculture ethnographer David Silver puts it, to "get a detailed sense of how particular individuals understand, conceptualize, and talk about [the Beltway] from their points of view, in their language-concept systems."⁶³ My interviews and survey responses also brought to light additional written materials, particularly maps and planning documents, of which I was previously unaware.

Anthropologist Michael Agar further explains that "language carries with it patterns of seeing, knowing, talking, and acting. . . . Different words signal a different

⁶³ David Michael Silver, "Cyberspace Under Construction: Design, Discourse, and Diversity in the Blacksburg Electronic Village and in the Seattle Community Network," Ph.D. dissertation, University of Maryland, College Park, 2000, 236. The discrepancy between number of interviews conducted (44) and number of informants (54) results from several of the interviews taking place with groups of informants.

mentality, a different way of looking at things."⁶⁴ Accordingly, I pay close attention to the language used by my informants to help me understand how they conceptualize and experience the Beltway differently, how they apply different patterns of seeing and knowing.⁶⁵ Along the same lines, and following ethnographic convention, I cite my informants extensively, and include my own thoughts and experiences in the first person as well.

In this study, I draw on both my 607 Web survey responses and my 44 interviews, but I go into more depth on certain individuals' experiences and beliefs with respect to the latter group, in order to avoid some of the potential problems that can result from generating conclusions from a large pool. Anthropologist Lila Abu-Lughod writes that

when one generalizes from experiences and conversations with a number of specific people in a community, one tends to flatten out differences among them and to homogenize them. . . . The effort to produce general ethnographic descriptions of people's beliefs or actions tends to smooth over contradictions, conflicts of interest, and doubts and arguments, not to mention changing motivations and circumstances.⁶⁶

Instead, Abu-Lughod recommends giving attention to understanding how a particular, small set of people experience a certain community and its institutions, by "showing the

⁶⁴ Michael Agar, Culture Shock: Understanding the Culture of Conversation (New York: William Morrow, 1994), 71, 89.

⁶⁵ My approach to ethnography and to its emphasis on the meaning systems of group members derives primarily from Agar, Culture Shock; John L. Caughey, Negotiating Cultures and Identities: A Life History Approach (Wilmington, Del.: SR Books, forthcoming); Robert M. Emerson, Rachel I. Fretz, and Linda L. Shaw, Writing Ethnographic Fieldnotes (Chicago: University of Chicago Press, 1995); and James P. Spradley, The Ethnographic Interview (New York: Holt, Rinehart, and Winston, 1979).

⁶⁶ Lila Abu-Lughod, "Writing Against Culture," in Recapturing Anthropology, ed. Richard Fox (Santa Fe: School of American Research Press, 1991), 152-153.

actual circumstances and detailed histories of individuals and their relationships."⁶⁷ I move in that direction, particularly in Chapters 4 and 5, but there and elsewhere I address my informants' life histories—captivating in and of themselves—only briefly in the context of their connection to the Beltway.

To identify potential informants for more recent time periods, I spoke with individuals at SHA in Maryland and VDOT in Virginia to learn which engineers, planners, and maintenance supervisors were currently or recently responsible for the Beltway. My Web survey turned up additional informants, including individuals who lived next to the Beltway and who served as emergency medical technicians on the highway. However, the people who designed and built the Beltway in the first place were harder to find. John E. Harwood, then chief engineer of Virginia, warned in 1972—almost 25 years before I began this study—that "[u]n unraveling the story of how the [Beltway's] plans were made two decades ago is difficult . . . because most of those involved have retired. In fact . . . most of them are dead."⁶⁸

Even those designers who are still living sometimes hesitate to step forward.

*Sidney Miller, one of the principal designers of the original Virginia portion of the Beltway, began our first conversation by downplaying his contributions and insisting that I use a pseudonym:

First of all, let me say this. In terms of, if you want to give credit to anything, it's obviously the firm I worked for that deserves the credit for this, and not necessarily me as an individual because there were other individuals who were at that time, at the beginning of this, that were in a much more, obviously, senior position. From senior partners down to project managers down to lowly

⁶⁷ Ibid., 153.

⁶⁸ David R. Boldt, "Beltway: Planning Problem," Washington Post, 26 December 1972: B1.

young engineers like myself. . . . I could give you lots of names, but they really wouldn't mean anything. Just like my name shouldn't mean anything. It's the firm, more or less, that did the work. . . . I mean, there are many, many people that I could give names to, but I don't think my name or their names mean much in terms of the historical development of things.⁶⁹

As in any study involving live people, I had the additional challenge of persuading my potential informants, once I located them, to participate in this project. Here my personal background came into play, as this study took on somewhat of a community history bent. On a smaller scale, grade-school students are often assigned to travel through their community, interview old-timers, and document the town's history and flavor. This study is, for me, a larger version of the same task. As a lifelong resident of suburban Maryland, the Beltway has always been a part of my social community, and that experience played a key role in my informants' willingness to speak to me.

William Arney, citing the educational philosopher Ivan Illich, introduces the geographic concept of "a circle with a radius of 22 kilometers (about 14 miles) that Ivan Illich calls a 'Kohr' to honor Leopold Kohr and that is, many seem to agree, the geographical area that one person can actually come to know and care about over time."⁷⁰ The Beltway, with a radius of about 8 to 10 miles, roughly defines my "Kohr." Time and again the highway officials, police officers, or residents I spoke with during my research grew visibly more comfortable when I said something which demonstrated my familiarity with the area. My affiliation with the University of Maryland was usually a golden key (which is one reason why I chose to position this project from that

⁶⁹ Interview with *Sidney Miller, 6 February 2001. In this study, I refer to informants who requested anonymity by using an asterisk (*) next to the first appearance of their names in each chapter.

⁷⁰ William Ray Arney, Thoughts Out of School (New York: Peter Lang, 2000), 155.

institution); almost everyone I spoke to in Maryland, and some in Virginia, had some story to tell about their own or their child's or friend's experiences at the university.

My academic training in transportation planning opened additional doors, as highway planners and engineers spoke more freely once they heard me speaking their language. Name-dropping also helped; references to my conversations with respected engineers and officials quickly opened heavy doors and reluctant mouths. The beginning of my meeting with Larry Kidwell, a facility maintenance supervisor for Maryland's State Highway Administration, is indicative:

Korr: I've managed to talk with Bill Shook and Slade Caltrider—

Kidwell: No kidding [smiles]!

Korr: —and some of the original engineers—

Kidwell: Slade. I remember Slade very well. I tell you what, I wish he was around now. Because he was a fair man. He was tough and persistent, but he was fair.⁷¹

My willingness to share information about myself, on my website and in media reports, increased the comfort level of some of my informants. One individual, for example, responded to my Web survey only because he read on my website, which was linked to the survey, that I was a fellow banjo player. Finally, some people I spoke with, particularly the Beltway's immediate neighbors and a few of the original designers, were simply eager to have a chance to tell their stories.

Web Surveys: Reversing the traditional dynamics

⁷¹ Interview with Larry Kidwell, 20 March 2001.

Using traditional ethnographic techniques, I spent time watching a set of people and listening to how they articulate and conceptualize the Beltway's role in their lives. However, these procedures required extensive time to learn about a few individuals. While this approach is valuable for the depth of understanding it can allow, other methods offer the opportunity to learn about more people over a smaller period of time.

In her recent ethnographic study of World War I reenactors, Americanist Jenny Thompson supplements her face-to-face interviews with a written survey she has sent to 500 reenactors.⁷² In this study, I follow her lead by incorporating a survey in addition to personal interviews, but unlike Thompson, I elect to use a Web survey, distributed and returned over the Internet. This research tool was just emerging as I began this study and has developed concomitantly with my work: a recent review of the Web survey field cites 71 references, 58 of which were published after I began my research in 1996.⁷³

For her study, Thompson collected the names and addresses of over 500 World War I reenactors from a fairly small overall pool of possible informants. Using several sources, she was able to identify individual reenactors with minimal difficulty. But my study has a far larger pool, because "individuals whose lives are somehow associated with the Capital Beltway" encompasses millions of people in Washington and far beyond. One option was to choose a finite number of individuals who live within a certain distance of the Beltway and to mail them a written survey. But I hoped to

⁷² Jenny Thompson, "Common Soldiers: An Ethnography of Twentieth-Century War Reenactors," Ph.D. dissertation, University of Maryland at College Park, 1999.

⁷³ Mick P. Couper, "Web Surveys: A Review of Issues and Approaches," Public Opinion Quarterly 64 (Winter 2000): 491-494.

receive responses from people I had no obvious way to identify: individuals who drove on the Beltway's opening day, who built its bridges, who had unique experiences on it. Sending a written survey to a random sample would almost certainly not bring in that range of responses.

But a Web survey might, and did. Mick Couper notes the benefits of using this nontraditional approach:

Not only can researchers get access to undreamed of numbers of respondents at dramatically lower costs than traditional methods, but members of the general population too can put survey questions on dedicated sites offering free services and collect data from potentially thousands of people. The ability to conduct large-scale data collection is no longer restricted to organizations at the center of power in society, such as governments and large corporations. The relatively low cost of conducting Web surveys essentially puts the tool in the hands of almost every person with access to the Internet, potentially fully democratizing the survey-taking process.⁷⁴

Certainly using a Web survey saved me money over printing and distributing a traditional paper survey. But beyond that, it allowed open access to as many informants as wanted to reply—perhaps not appropriate for a quantitative analysis, but ideal for a cultural study where each individual's words contribute toward understanding the overall meanings and beliefs of the groups to which they belong.

At least two other surveys collecting people's thoughts and attitudes to the Beltway preceded mine. Shortly after the Beltway's 1964 opening, the American Automobile Association (AAA) ran an advertisement in its magazine asking members to describe their experiences on the highway. Between 500 and 600 people responded, giving the AAA ammunition for urging specific steps to be taken to improve safety and

⁷⁴ Ibid., 464-465.

traffic.⁷⁵ I could not locate the responses to this survey, and in any case, that and some other AAA surveys are limited by their recipient pool, since only club members are invited to respond.⁷⁶ Without access to the responses, this survey was not a useful source for me.

More useful is the report from a series of focus group sessions conducted by the Preusser Research Group for the U.S. Department of Transportation in August 1994. In these sessions, Preusser gathered 64 non-commercial drivers from Maryland, Virginia, and the District of Columbia, and 18 area commercial truck drivers. Preusser's quotas ensured a distribution of non-commercial drivers roughly proportional to the Beltway's overall driver populace in gender, age, residence, and frequency of Beltway use. The detailed responses echo many of the attitudes and experiences I found in the responses of my own informants, and I draw on Preusser's report—especially on the responses of the truck drivers, of whom I did not interview nearly as many—later in this study.⁷⁷ In the five years of research for this study, not a single person I came into contact with made any mention of either of these previous Beltway surveys, suggesting that they are effectively unknown to both the public and the government.

Using both Web surveys and paper surveys as models, I drew up a draft of my own survey in early 2000 and, after taking HTML classes to learn how to program for

⁷⁵ "50-M.P.H. Limit Urged for Beltway Section," Evening Star, 4 January 1966: B-4.

⁷⁶ For a further (and somewhat dated) critique on the ways AAA uses its member surveys, see Richard Hebert, "How the AAA Uses Its Members to Pave the Way for More Freeways," Washingtonian, June 1970: 34-37, 61-63.

⁷⁷ Preusser Research Group, Inc., "Drivers' Perception of Problems and Solutions: Report of Beltway User Focus Groups, September 20, 1994," in Capital Beltway Safety Team, Capital Beltway Safety Update (n.p.: [Virginia Department of Transportation,] 1994), 209-255.

the Web, coded the draft into a working HTML document. Three rounds of pilot testing by friends and colleagues offered numerous critiques and suggestions. After making many revisions and testing the final draft on several computer platforms and monitors (because Web pages viewed through browsers appear differently when seen on different monitors or platforms), I launched the survey on my personal university Web page.

A traditional paper survey goes directly to its recipients, who complete it if they choose and then return it to the researcher. For a Web survey, the dynamics are reversed. After mounting the survey on the Web, I had not actually sent it to anybody. Instead, anyone who chose could then respond directly to me by accessing and filling out the survey. At that point, my challenge became how to publicize the survey and then to entice potential informants to respond to it. A question on the survey asking for how respondents learned about it allows me to trace how this process played out.

I began by sending personal emails to virtually everyone I knew, encouraging them to forward the survey and to complete it themselves. I also posted a notice on two Usenet newsgroups, `misc.transport.road` and `dc.driving`. These steps brought in over 100 responses.

But my informant base really opened up when the media began to publicize for me, a strategy I was able to use because of my history within the Washington community and my positioning of this project as an academic endeavor. Bob Levey, who writes a regular column on community life for the Washington Post, at my request published a description of my research in progress and a suggestion to complete my Web survey. Reporters for smaller local newspapers read Levey's column and published their own articles. Other journalists read those smaller papers and contacted me for

further pieces, including one run in the Baltimore Sun and picked up by the Associated Press; that piece was then picked up by a number of other AP newspapers including the Washington Times and the Frederick (Md.) News-Post. Nonprint journalists also read the articles and asked me to appear on their programs; WRC-TV (NBC) displayed my survey's URL (its Web page address) while airing my interview, and WMAL-AM (ABC) put up a link to my survey on its own Web page while interviewing me live. Each of these episodes drew a group of respondents, many of whom forwarded the information to their own friends and families. I had hoped for this; as a result, the media did not so much publicize my research-in-progress as play an integral enabling role in it.⁷⁸ The breakdown of how each respondent learned about my survey appears below (note that the total number of sources does not equal the total number of respondents, because some identified more than one source and others listed none):

Table 2.—Source for Finding Out About Web Survey
(594 sources given)

<u>Source</u>	<u>N</u>
<u>Washington Post</u>	189
Directly from researcher	83
Friend or neighbor	65
WRC-TV (NBC)	51
Co-worker	35
WMAL-AM (ABC)	28
<u>Baltimore Sun</u> or Sunspot.com	26
Email (unspecified)	25

⁷⁸ See "Student Seeks Help for Beltway History," Greenbelt (Md.) News Review, 19 October 2000: 4; Bob Levey, "Bob Levey's Washington," Washington Post, 24 October 2000: C11, 31 October 2000: C11; Jessica Leshnoff, "The Roads Scholar: Beltway Dissertation Keeps UM Student in the Loop," Silver Spring (Md.) Gazette, 18 December 2000: A-1; and JoAnna Daemmrich, "The Road More Traveled," Baltimore Sun, 23 January 2001: 1A.

<u>Gazette*</u>	24
Family member	20
Usenet newsgroup	10
<u>College Park</u> (UMCP alumni magazine)	7
Newspaper (unspecified)	6
<u>Washington Times</u>	4
Web surfing	3
Hungarian listserv	3
Researcher's high school alumni newsletter	3
<u>Greenbelt News Review</u>	2
<u>Bowie Blade-News</u>	1
<u>Fredericksburg Free-Lance Star</u>	1
<u>Montgomery Journal</u>	1
Truckinginfo.com	1
<u>Trucking</u> magazine	1
<u>The Trucker</u> newspaper	1
News story (unspecified)	1
University of Maryland Web page	1
Plastic.com	1
zdnet	1

* Gazette includes the Montgomery Gazette, Silver Spring Gazette, Rockville Gazette, College Park Gazette, Burtonsville Gazette, and other unspecified zoned editions.

With help from the media, I received a total of 607 individual responses (by August 2001; the Web site remained active thereafter). In Chapter 8, I discuss in detail the demographic breakdown of respondents. It is difficult to compare the demographic characteristics of my respondents to the full set of people who interact with the Beltway because that set is so large (it begins with the roughly one million people each day who use the highway) and unknown (no one has accurately assessed the characteristics of its users in detail). Still, the tables in Chapter 8 indicate that my survey is not generally skewed toward particular demographic subsets, and my discussion in that chapter suggests explanations for the distributions that do occur. These distributions include some interesting parallels to broader trends; for example, the respective shares of

responses from Maryland and Virginia almost exactly mirrored their respective proportional shares of the Beltway's mileage.

In interpreting the data contained within the replies, as well as in structuring the survey in the first place, I had to account not only for the dynamics associated with traditional surveys, but also the unique concerns inherent to Web surveys. In his review of the field, Mick Couper breaks down this type of survey into eight categories; mine comes closest to his second type, what he calls "self-selected Web surveys." This approach, he explains, "uses open invitations on portals, frequently visited Web sites, or (in some cases) dedicated 'survey' sites. This is probably the most prevalent form of Web survey today and potentially one of the most threatening to legitimate survey enterprises because of the claims for scientific validity that are sometimes made."⁷⁹

Couper is justified in his concern that such open surveys, with no access restrictions and minimal control over multiple completions, are not "scientifically" valid. He offers examples to illustrate how the problems arising from this type of Web survey stem from extrapolations, when "inference or generalizations to [a target] population are based on leaps of faith rather than established statistical principles."⁸⁰ However, he also notes that "[a]ny critique of a particular Web survey approach must be done in the context of its intended purpose and the claims it makes."⁸¹ Accordingly, rather than generalize or make a leap of faith, I approach the survey responses from a cultural perspective. What does each response tell me about its writer? How does each

⁷⁹ Couper, 478-479.

⁸⁰ Ibid., 477.

⁸¹ Ibid., 465.

person's individual context (or as much of it as they reveal to me) inform their responses? What meanings systems and beliefs are apparent in those responses? I do not argue that my respondents' surveys are precisely representative of all Beltway drivers and critics. However, the respondents, who range across demographic categories and whose ideas and experiences I have in most cases corroborated from other sources, are most likely at least somewhat representative of the far greater group of people whose lives intertwine with the Beltway.

Beyond his primary concern, Couper also lists four limitations present in all Web surveys. I introduce them here with a brief description of how I have accounted for each. First, coverage error refers to people missing for specific reasons from the target group being studied. For Web surveys, this includes most obviously anyone without access to the Internet or knowledge of what to do with it. I created my Web survey knowing that the percentage of Washington area residents who have Internet access is higher than in most metropolitan areas, such that I would have less of a deficiency in coverage than if I were targeting the survey elsewhere; as of February 2000, 56.1 percent of regional residents had Internet access, the third highest rate in the nation.⁸² Even so, I omitted a sizable portion of my potential informant pool by providing only an Internet form of the survey; some individuals familiar with my research, particularly elderly Washington area residents, told me explicitly that they could not participate

⁸² Michael Pastore, "America's Most Wired Cities," online, 12 April 2000, <http://cyberatlas.internet.com/big_picture/geographics/article/0,,5911_151251,00.html>

because they are not Internet-literate, and others did not have access. The omission of this segment of my target pool is admittedly a weakness in my research approach.⁸³

Secondly, sampling error recognizes that not all members of the target population are measured, so that if I were to repeat my survey process, a different subset of Beltway users would respond.⁸⁴ This is more of a problem for probability-based survey designs, where a representative sample is used to generalize to the entire target population. Since I apply a non-probability, cultural approach instead, sampling error is not as significant an issue. To gauge whether the responses from my particular 607 respondents were plausible and at all representative of others' experiences and beliefs, I compared them to the data in other types of sources, especially personal interviews and primary records. In almost every case, I found that portions of the survey responses which at first seemed questionable—for example, Montgomery residents' level of concern at losing a supposedly treasured natural landmark to the Beltway, or the circulation of a racially derogatory nickname for the highway—were supported by other types of sources and were not the product of an eccentric, unique response.

Measurement error, the third type of limitation, indicates the extent to which respondents' answers are their true answers to the questions the researcher believes he or she is asking.⁸⁵ I attempted to minimize respondent confusion by running my survey through three rounds of pilot testing, soliciting critique on the clarity of wording and visual layout, and revising in response to the critiques. Even so, in some cases

⁸³ Couper, 467-473.

⁸⁴ Ibid., 467, 473.

⁸⁵ Ibid., 475-476.

informants wrote that they did not understand my question(s) or did not want to take the time to think through and answer certain questions. My specific instruction to respond to as many questions as the respondent desired was intended to make such informants feel more comfortable and recognize that I would find their responses valuable even if they chose to answer selectively. Informants might still opt to answer inaccurately, as they could also for a paper survey or interview; in each case the researcher can only hope that most respondents choose to be truthful and compare responses to other sources of information. I expected that if the answers to any survey response appeared consistently implausible, I could discount the veracity of most of the response; this happened for only one of the 607 replies I received.

In fact, I expected to receive a sizable portion of responses which were terse or characterized by exaggeration. I was surprised to find that most responses, instead, were thoughtful, plausible, and often emotional. The most convincing responses included the respondent's name, phone number, email address, and the details and emotions of specific and viable experiences. In some cases, the memories created unique links between the respondent and the Beltway, as in this excerpt from Michigan resident Doug Osmond:

The area between New Hampshire Ave and the Potomac river is a favorite. In the summer of 1965, I was a summer hire for the Md State Roads Commission and was responsible for the construction of the chain link fence that was put up on both sides of the beltway, in that area. I was a construction inspector, for the SRC and we worked with a fence crew that drove down from W. Virginia, everyday, to spend 12 or more hours working on the fence. So, I always look out for that fence, most of it gone now, when I drive in that area....Also I have always had a special feeling to be able to say that I was a part of the beltway construction, even if it was only the fences.⁸⁶

⁸⁶ Beltway Survey #265.

In other responses, I read intensely emotional accounts of how the Beltway affected one individual life after another. Arlington resident Kenneth P. James offers such an example:

I have grown up almost exclusively in this area. The beltway has played a rather large role in my life, my families lives, and our travels. 5 years ago, my uncle, Timothy Hughes, was killed while traveling home from work on the capital beltway. It happened just before the overpass for good luck road. It was early on a saturday morning. He was driving home from his job at the University Of Maryland. He would typically take his son to work with him when he had to work on saturdays, but for some reason, he decided not to this particular saturday. He was killed do to someone else's ignorance, and lack of attention to driving. The one person that witnessed it, did not get the tag of the vehicle that caused the accident. He was in the far right lane (slow lane) on the inner loop heading home to oxon hill. The person in the next lane over from him decided they wanted to get into his lane, without looking or signaling. Timothy swerved onto the shoulder to avoid an accident, and struck a parked tow truck, dead on in the rear, at about 60 mph. He was killed instantly. Some day, I think it would be appropriate to perhaps have a memorial to those who have died on the beltway. I'm sure it has claimed as many lives, as a small battle in the civil war.⁸⁷

Both James and Osmond may have made up their stories, but I cannot identify any motive for doing so. Both accounts include plausible details of personal experiences and the writers' retrospective thoughts; while James's episode is sadder than Osmond's, neither stood to gain anything by fabricating.

The following excerpt, in contrast, appears to blend fact and fiction:

I was born in 1951, and we lived on the top of the hill, Parkwood Drive. All of Rock Creek stretched out for all us kids to play in...for miles and miles, nothing but the most wonderful wild woods! Deer, snakes, coons, foxes, the creek full of sunnies and bass, clean water etc...and we ran and ran from the moment the sun came up until way past dark. The woods was my whole childhood, my whole life and joy. Then, the bulldozers came, and the work men came. The[y] gutted our entire LIFE, for God's sakes. I was chased and damn near caught by some men...and then the parents forbade the girl children from even straying an inch

⁸⁷ Beltway Survey #407.

off the home property. I remember the workers brought beer and whiskey and guns. They shot every creature that moved, killed snakes and nailed them on trees. Right behind our house they dynamited out our "Gold Mine" and completely changed the course of the creek. They burned off many acres, tore out as many trees as they could...well, it was a total rape. A slashing. To retaliate, we kids saved our money, bought several bags of sugar, and in the dead of a Saturday night, after the drunks had gone home, we poured sugar into the gas tanks of three pieces of heavy equipment. I am, to this day, not at all sorry.⁸⁸

In this case, the respondent adds seemingly implausible details to an otherwise viable account of her childhood. Several other informants and survey respondents shared with me similar stories of losing their cherished childhood woods to the Beltway. But the beer, whiskey, guns, inebriations, and nailing of snakes to trees do not appear anywhere else among my sources. I would have expected to hear some mention of them from either the Beltway's original engineers with whom I spoke, who were mostly forthcoming about mistakes they believe in retrospect they made, or from the other respondents who were also upset about the deforestation. Although this respondent appears to have needlessly exaggerated what is likely a true memory, the underlying issue of individual lives and childhoods disturbed by the Beltway is indeed germane to this study, as we will see later, even if this specific case is partly or wholly fictitious. This text is the rare example of a response that gave me serious reason to suspect exaggeration.

Finally, Couper's fourth type of error, nonresponse, is hardest to define for my survey. Nonresponse error measures the extent to which members of the target population who are invited to participate do not. In my case, personal feedback indicates that some people who learned about my survey did not respond because of

⁸⁸ Beltway Survey #574.

lack of time, lack of Internet access, or problems accessing my Web site. But as Couper notes, the nonresponse rate is virtually impossible to determine for a survey like mine in which an open invitation to participate is offered, because "the denominator of those eligible to participate is typically not known, and therefore the nonresponse rate is unknowable."⁸⁹

Because research has not yet suggested how the nonresponse rate for Web surveys compares to traditional paper surveys, Couper extrapolates from several studies on email surveys, which conclude that the response rate is lower for the email surveys. Couper offers several possible reasons for the lower rate, all of which I tried to compensate for in my Web survey. For one, motivating devices used in paper surveys such as personalized signatures and letterhead cannot be used in email surveys.⁹⁰ In my Web survey, however, I tried to use functional equivalents to the paper survey devices by mounting the survey on my personal Web page and by divulging personal information (thus personalizing the process and demonstrating that I too was sacrificing my privacy), by situating the survey under a ".EDU" address and emphasizing its part in a student academic project (thus making clear that I am not out for profit), and by highlighting the connection to the University of Maryland (to which many people in my target population had personal ties).

Email surveys also have a low response rate, Couper suggests, because "technical difficulties interacting with an Internet survey (whether e-mail or Web) may discourage some from completing (or even starting) the survey, relative to the ease of

⁸⁹ Ibid., 473.

⁹⁰ Ibid.

completing a paper-and-pencil mail survey."⁹¹ This was certainly the case when at least four different newspapers misprinted the URL, or Internet address, for my survey, thereby cutting off access to my survey for all but the most intrepid respondents. It was also the case when the computer programming of the survey made responding difficult, and two frustrated informants emailed me that they had spent twenty minutes filling out the survey when their computer erased everything they had written.

I dealt with this first by subjecting the survey to three waves of pilot testers, and then, in an unorthodox move, by changing the form of the survey while already in progress. Those changes responded only to faults in the survey's HTML coding and did not significantly affect how or what respondents could do: On the first day of the survey, I extended the number of characters respondents could enter for their email address from 25 to 55 (one respondent's long address would not fit); on the third day, I scaled back the number of responses which the operating program required to be filled out before accepting the completed survey; in the fourth week, I added "wrap=physical" to all text areas so that free responses would appear on the screen line by line rather than in one long run-on line.⁹²

Couper further believes that email surveys have lower response rates because of confidentiality concerns.⁹³ In my survey, consistent with ethical standards of

⁹¹ Ibid., 474.

⁹² Originally, the survey required extensive demographic information as well as permission to use the respondent's survey in my research. I took the second step above after an angry respondent emailed me that he did not want to give me all his demographic information, and that his computer erased all his other answers when he tried to submit the survey without the demographics. I agreed, and scaled back the required fields to include only the permission waiver.

⁹³ Couper, 474.

ethnographic research, I offered respondents the options of being identified by name, by direct identifier (gender, age, etc.), or anonymously.⁹⁴ All three options were chosen by a significant percentage of informants, as I explain in Chapter 8. Additionally, I divulged personal information about myself through my Web page (linked to the survey) so that respondents would know exactly to whom their confidential responses were going.

As noted, the survey received 607 responses through August 2001, which I draw on extensively through the remainder of the dissertation, especially in Chapters 8 and 9. The survey itself is reproduced in Appendix B. I used a Web survey in part to reach out to a broader informant base than I could reach with a paper survey, and this attempt was successful. I received responses from people who grew up near the Beltway, who drove fire trucks and ambulances on it, whose family members had died on it, who helped build it, who lived across the country, who lived overseas. Because that range of respondents would not have been possible by sending a paper survey to a previously identified set of individuals, because the Web survey helped me locate informants for face-to-face interviews, and because it functioned so effectively as a complement to traditional ethnographic techniques, documentary research, and cultural landscape analysis, I encourage further, carefully designed use of this method to take advantage of its benefits.

By merging the four approaches discussed in this chapter, I am indirectly asking methodological questions as well as the six content-oriented ones listed in Chapter 1. These queries include: What is a cultural landscape approach, and how can it be applied

⁹⁴ For a discussion of ethical principles in ethnography, see Spradley, 34-39.

to roads? How can a road be studied ethnographically? How can a Web survey be incorporated into an odological, cultural landscape, or ethnographic analysis? How can avenues of inquiry suggested by planning history enrich a broader cultural landscape study, particularly of a road? In short, from a methodological perspective, I am asking what constitutes an effective odology, especially from an American Studies foundation. My answer is a combination of cultural landscape analysis, documentary analysis, ethnography, and planning history, all informed by a specific set of guiding questions.

I now begin this study of the Capital Beltway by looking at the origins of circumferential highways and the state of transportation in the metropolitan Washington region immediately prior to the Beltway's construction.

CHAPTER 3

"THERE WAS JUST NO EASY WAY TO GET ANYWHERE":

WASHINGTON'S TRANSPORTATION IN THE 1950s

The Old Bladensburg Road was an important commercial route for colonial Maryland's tobacco farmers. A few miles north of what would become the District of Columbia, the old road connected the farms of Montgomery and Prince George's Counties to the port town of Bladensburg on the Anacostia River, a northeastern branch of the Potomac about 25 miles west of the Chesapeake Bay. But Old Bladensburg was particularly important because it crossed and linked the rural farmlands, while most other roads in the colonial and post-colonial eras radiated outward from the cities of Georgetown, Md., and Alexandria, Va., both later part of the District of Columbia.

By the 1950s, the Old Bladensburg Road was paved, but otherwise little about the road had changed beyond its name. With a far larger population and thousands of motor vehicles, the two Maryland counties were still connected by the same narrow road, which was alternately called the Kensington-Wheaton Road (in Kensington), the Old Bladensburg Road (from Wheaton to Takoma Park), and University Lane (from the Prince George's County line to U.S. 1 in College Park). But Maryland Route 193 no longer served the occasional tobacco farmer, and the road lagged far behind modern safety and capacity standards. Its drivers called it the "Old Bladensburg Rut" because, as the Washington Evening Star reported in 1955,

1. It is clogged with the heaviest traffic of any Maryland State highway in its class.
2. It has no curbs and few adequate shoulders to provide drainage and safety.
3. Its blind curves and its narrowness invite death to motorist and pedestrian

alike.

4. Every main intersection becomes a traffic bottleneck.
5. Hidden entrances are commonplace.
6. Power poles, fire hydrants, bridge and culvert walls, trees and undergrowth crowd its edges.
7. It is treacherous when wet.
8. Its surface is pitted and uneven.
9. Sudden short inclines impair visibility.
10. Buses and trucks slow traffic down to a walk.⁹⁵

Accidents were common; over 350 between 1950 and 1955 caused more than \$75,000 worth of property damage in Montgomery County alone. Despite all this, the narrow, two-lane road, serving 10,000 vehicles per day, remained the "only 'direct' cross-county road linking those areas of Montgomery and Prince George's Counties."⁹⁶

The story was much the same elsewhere in metropolitan Washington. Winding, overused roads from a different era struggled to accommodate the traffic produced by a growing suburbia around the nation's capital. In this chapter, I set the historical and cultural context for the analysis of the Beltway which follows. I examine what preceded the Capital Beltway and how drivers made their way around the area before the circumferential was built. In the process, I look at the origin of ring roads, their introduction to the Washington area, and the disappearance of Washington's other four proposed beltways. Was the Capital Beltway, now so passionately hated by regional drivers, a welcome or useful sight when it opened up for the motorists of 1964?

America's Beltways

⁹⁵ John W. Stepp, "Story of a Road—Route 193 is Worst of Its Kind in Maryland," Sunday Star, 30 January 1955: A-18.

⁹⁶ Ibid.

President Dwight Eisenhower is generally credited with the original vision for the Interstate Highway System, inspired by a 62-day transcontinental drive he took as a soldier in 1919 across the narrow and bumpy Lincoln Highway, one of the nation's better roads at the time.⁹⁷ Eisenhower signed into law the Federal-Aid Highway Act of 1956, which created the National System of Interstate and Defense Highways, providing for the construction of some 40,000 miles of highways across and between cities over the subsequent 16 years. The plan was viable for individual states because of its financing formula, in which the federal government paid 90 percent of construction costs, funded through fuel taxes, and the states paid the remaining 10 percent while supervising the construction according to federally approved standards. Of the 40,000 planned miles of freeways, 2300 miles were reserved for beltways.⁹⁸

However, both the beltways and the thinking underlying the principles of the Interstate system dated back to two decades earlier, when Franklin Roosevelt and the Bureau of Public Roads (BPR) first investigated the possibility of a national freeway system. (I use the term "freeway" in this context in its original sense, as coined by

⁹⁷ Tom Lewis, Divided Highways: Building the Interstate Highways, Transforming American Life (New York: Viking, 1997), 89-90; William Kaszynski, The American Highway: The History and Culture of Roads in the United States (Jefferson, N.C.: McFarland & Company, 2000), 163.

⁹⁸ Van Dyne, "Getting There," 202; Payne-Maxie Associates, The Land Use and Urban Development Impacts of Beltways: Executive Summary (Washington, D.C., 1980), 5. For more detailed discussion of the development of the Interstate system, see Lewis, Divided Highways; Mark H. Rose, Interstate Express Highway Politics, 1939-1989, revised ed. (Knoxville: University of Tennessee Press, 1990); Gary T. Schwartz, "Urban Freeways and the Interstate System," Southern California Law Review 49 (1976): 406-513; Bruce E. Seely, Building the American Highway System: Engineers as Policy Makers (Philadelphia: Temple University Press, 1987); and Richard F. Weingroff, "Broader Ribbons Across the Land," Public Roads, June 1996 (Special Edition): 1-16, 32-39.

planning expert Edward M. Bassett, to indicate freedom of movement, not the absence of tolls.)⁹⁹ In 1937, Roosevelt asked the BPR to research the feasibility of a transcontinental network of three north-south and three east-west toll highways. In its 1939 report, Toll Roads and Free Roads, the Bureau rejected the idea of toll roads because only a portion of the system would pay for itself. Instead, it recommended a system of 26,700 miles of free highways between and through cities, and suggested ways for designing these highways in urban areas. Because Toll Roads and Free Roads "strongly influenced subsequent national policy," the Bureau of Public Roads's research is a key component of the effort to understand how and why our current national highway system, and especially our beltways, were designed the way they were.¹⁰⁰

In the 1950s and in the decades immediately preceding, Washington was plagued by heavy traffic within the city and by inadequate inter-suburban roads outside of it. Under the BPR's original line of thinking, though, a beltway was not the solution to the first of those problems, the city's traffic; in fact, travel between the suburbs was hardly addressed at a time when prevailing work patterns sent men into the central city to work and back to outlying points at the end of the day. The Bureau of Public Roads, Clifford Ellis writes,

rejected the idea that bypass routes could solve the urban congestion problem.

⁹⁹ Edward M. Bassett, "The Freeway—A New Kind of Thoroughfare," American City 42 (February 1930): 95. This was not Bassett's only contribution to influencing the structure of American cities: as chair of the New York City Commission on Building Districts and Restrictions, he promoted and oversaw the 1916 enactment of the nation's first comprehensive zoning laws, drawing on what he had seen during a 1908 visit to Germany. See Garrett Power, "The Advent of Zoning," Planning Perspectives 4 (1989): 2-3.

¹⁰⁰ Clifford Donald Ellis, "Visions of Urban Freeways, 1930-1970," Ph.D. dissertation, University of California, Berkeley, 1990, 137-138.

The swelling of traffic volumes on urban highways was caused by "a multiplicity of short movements into and out of the city," not through traffic headed for destinations beyond. Bypass routes would siphon off a relatively small portion of traffic, because "As all traffic maps show, the greater part of the heavy traffic at a city entrance is an in-and-out movement of local generation."¹⁰¹

The only effective solution for heavy city traffic, BPR engineers argued, was "the provision of adequate facilities for conduct of the heavier entering traffic streams through the city at or near its center, and on to appropriate exit points."¹⁰² New radial freeways connecting the city center with its outskirts, stretching out along all four compass points unless blocked by water, would achieve this goal.¹⁰³ So an expanded series of arterial highways, not beltway-style bypass routes, comprised the Bureau's primary strategy for dealing with urban traffic.

Beltways appeared in its secondary strategy, wheels to connect the spokes created by the radial freeways proposed in the first step. This was not a new idea. Ring roads were well-known among city planners of the City Beautiful movement (1890-1920), and had appeared even earlier to provide access between roads stretching out to farmlands from market and city centers. Daniel Burnham's 1905 Report on a Plan for San Francisco included a diagram and plan for an urban circulation system with a "classic radial-concentric arterial plan," essentially a set of radial roads connected by three concentric rings.¹⁰⁴ But no major American city had this type of purposefully

¹⁰¹ Ellis, 139-140. Ellis's quotations are from U.S. Congress, House, Committee on Roads, Toll Roads and Free Roads, report prepared by U.S. Bureau of Public Roads, 76th Cong., 1st sess., 1939, H. Doc. 272.

¹⁰² U.S. Congress, Toll Roads, 95.

¹⁰³ Ellis, 139, 146.

¹⁰⁴ *Ibid.*, 56-57.

designed, limited-access highway layout by 1939, so the BPR's suggestions constituted a groundbreaking attempt to put this element of planning vision into common practice.

After safer and efficient "conduct of large traffic streams into and across cities," the second priority of the Bureau's 1939 report was "belt-line distribution roads" around large cities and bypasses around smaller ones.¹⁰⁵ But while beltways now play a dual role in connecting suburbs and in providing a bypass for through traffic, the BPR did not envision the second function as significant. The report noted that while belt-line distribution roads around larger cities will sometimes "have some of the characteristics of bypass routes, and may actually serve to bypass a considerable amount of through highway traffic around the city, [t]heir primary purpose . . . is somewhat different."¹⁰⁶

What did the Bureau see as the beltways' primary purpose? In other words, what was the first published federal policy regarding circumferential highways? The language is opaque; here is the BPR's 1939 line of thinking on beltways, and my translation of the technical language. First,

That portion of the traffic from each of the [arterial] roads that is bound to or from the center of the city is best served, if it is a considerable movement, by the transcity connecting routes and expressways previously described. These same kinds of facilities also most directly serve the needs of traffic between each city-entering highway and points in or beyond the city that lie approximately diametrically opposite its point of entrance.¹⁰⁷

Traffic originating in the city or headed for it, in other words, will best be served by long-distance freeways which extend into and through cities.

¹⁰⁵ U.S. Congress, Toll Roads, 95.

¹⁰⁶ *Ibid.*, 96.

¹⁰⁷ *Ibid.*

But, for those parts of the traffic on each entering highway that are (a) interchanged with other entering highways not nearly opposite across the city and (b) originated in or destined to sections of the city similarly situated, the facility that will generally provide the best service is a circumferential or belt-line route forming an approximate circle around the city at its outer fringe.¹⁰⁸

So a beltway is the best way to deal with vehicles traveling between parts of the city, but not going directly across the city. This discussion still makes no reference to traffic between the suburbs, but the argument can be easily extrapolated to vehicles traveling between suburbs but not going 180 degrees across the city.

The principal function of such a route is the distribution of traffic approaching the city on any highway, either to the other highways to which it may need to transfer or to points on the circumference of the city nearest the urban section of its ultimate destination, and the distribution of outbound traffic in a reciprocal manner.¹⁰⁹

Again, the main purpose of a beltway is to facilitate intra-regional travel, not long distance through-traffic. The BPR engineers, though, did recognize that beltways may fulfill both functions, and in fact the Capital Beltway's current traffic problems derive in part from serving both local and through traffic.¹¹⁰ But the engineers of 1939 wrote this off:

The remedy commonly proposed for these conditions [congestion on arterial highways caused by through traffic added to commuter traffic] is the construction of a bypass highway. It is inaccurately assumed that the congestion results from the joining of the local with the through traffic, and that a substantial relief would be obtained if the through traffic were diverted outside the city beyond the beginning of congestion, and carried on a bypass to a similar point on the rural route at the other side of the city. In rare cases

¹⁰⁸ Ibid.

¹⁰⁹ Ibid., 96-97.

¹¹⁰ The Capital Beltway was not originally designed to accommodate heavy through traffic, but the 1973 cancellation of I-95 through Washington led to its permanent designation as Interstate 95. I address this development in greater depth in Chapter 9.

this remedy alone may prove sufficiently effective, but . . . bypass routes are of advantage mainly to a relatively small part of the highway traffic normally approaching a city, i.e., to that small part of the traffic that is actually desirous of avoiding the city.¹¹¹

Clearly the Bureau underestimated the percentage of future highway traffic which would be "actually desirous of avoiding the city," instead believing that the majority of long-distance travelers would be departing from or destined to any large city in their paths.

Even so, the BPR allowed for the possibility of some beltways to be developed specifically as long-distance bypasses. For those specific belts, engineers warned, special care must be taken to maintain very limited access because of the tendency for new highways to attract residential and commercial development which inundates those highways with new traffic:

If, therefore, a bypass or belt-line route is to remain the through-traffic facility it is intended to be, it must be protected from the encroachment of bordering developments that quickly engulf it and destroy its special character. This means that bypass routes must be built as limited-access highways, cut off from the bordering land except at a very limited number of points, and separated from all but a very limited number of the cross streets and highways intersected by them.¹¹²

Circumferentials like the Capital Beltway, which have interchanges every one or two miles, thus do not conform to the BPR's conception of effective beltways for long-distance traffic. But this type of beltway was almost an afterthought. In all, the 1939 report projects primarily a vision of beltways intended to ameliorate traffic conditions within a metropolitan area, to assist especially motorists traveling around the city but

¹¹¹ U.S. Congress, Toll Roads, 91.

¹¹² *Ibid.*, 97-98.

not diametrically across it, and only secondarily to provide a bypass for long-distance travelers.

A second federal highway report, written between 1941 and 1944 and "codif[ying] the basic planning doctrines for America's postwar urban freeways," for the most part echoes the vision of beltways as outlined in Toll Roads and Free Roads.¹¹³ But national traffic patterns apparently caused the authors of Interregional Highways, also commissioned by Franklin Roosevelt, to shift their perspective on the overall functions of beltways. In the 1939 report, BPR engineers had considered through-traffic to be "by far" a limited fraction of regional traffic.¹¹⁴ By 1944, the National Interregional Highway Committee (including BPR representatives) increased that share of through-traffic to "a portion—its volume depending usually upon the size of the city in relation to the sizes of other nearby cities."¹¹⁵ The Committee believed that significant long-distance traffic could be accommodated by beltways:

To serve this traffic bound to or from points other than the center of the city, there is need of routes which avoid the business center. Such routes should generally follow circumferential courses around the city, passing either through adjacent suburban areas or through the outer and less congested sections of the city proper. Generally, such routes can be so located as to serve both as arteries for the conveyance of through traffic around the city between various approach highways and as distribution routes for the movement of traffic with local origins and destinations to and from the various quarters of the city [emphasis added.]¹¹⁶

¹¹³ Ellis, "Visions," 155.

¹¹⁴ U.S. Congress, Toll Roads, 95.

¹¹⁵ U.S. Congress, House, Committee on Roads, Interregional Highways, report prepared by U.S. Interregional Highway Committee, 78th Cong., 2d sess., 1944, H. Doc. 379, 64.

¹¹⁶ *Ibid.*, 64-65.

The federal government, in laying the foundation for urban freeways and for the eventual Interstate system, thus expected beltways to be able to fulfill both functions (local and long-distance traffic) simultaneously. While the 1939 report envisioned most beltways as serving intra-urban and some serving inter-urban traffic, the 1944 report told the nation's highway planners and engineers that individual beltways could do both, effectively, at the same time.

The prospect of addressing both those concerns, and the added incentive of the 90-10 funding formula of the 1956 Federal-Aid Highway Act, led state highway officials to design and plan beltways around their cities. Between 1955 and 1995, some 100 complete or partial circumferential routes were constructed in the United States. A few predate the Interstate system and were absorbed into it (including the Capital Beltway, Baltimore's I-695, Massachusetts's Route 128/I-93/I-95, and San Antonio's I-410), but most postdate 1956 and qualified for the 90 percent share of federal funding of construction.¹¹⁷ Yet there has been little study of those 100 beltways and any of their social, economic, political, or cultural effects. Those few studies which have been published have focused almost exclusively on the economic effects of beltways. Because I look at the Capital Beltway from that approach in Chapter 9, I will examine what other beltway studies have been undertaken, and with what overall conclusions, in that chapter.

Postwar Metropolitan Washington

¹¹⁷ Christopher John Sutton, "The Socioeconomic, Land Use, and Land Value Impacts of Beltways in the Denver Metropolitan Area," Ph.D. dissertation, University of Denver, 1995, 42-43.

In the years after World War II, the Virginia and Maryland suburbs outside Washington realized a population and housing boom for many of the same reasons as other metropolitan areas. Federal policies, including easy credit via the GI Bill and lower down payments and more affordable mortgages through the Federal Housing Administration and Veterans' Administration, encouraged and helped families to buy houses. Builders constructed more low-cost starter homes because of limits on how much could be financed through federal programs. New and improved roads—even Maryland Route 193 was tripled in width shortly after the publication of the article at the head of this chapter—made the suburbs inviting and accessible. The baby boom meant that more families were looking for houses, and new ones were not as likely to be built within cities as in the open land surrounding them.¹¹⁸

Other factors unique to Washington drove the suburban expansion there. The federal government moved some of its agencies outside the city in an effort to protect them from a nuclear attack. The suburbs hosting these agencies, including Germantown, Md. (the Atomic Energy Commission), Gaithersburg, Md. (the National Bureau of Standards), Fort Meade, Md. (the National Security Agency), and Langley, Va. (the Central Intelligence Agency) grew to accommodate the federal workers and their families. Developers found relatively cheap land in Fairfax, Montgomery, and Prince George's Counties, and often bought it in large parcels. In addition, some middle-class whites chose to move from heavily black Washington to the then-largely white suburbs

¹¹⁸ Van Dyne, "As Far As The Eye Can See," 92; Kenneth T. Jackson, Crabgrass Frontier: The Suburbanization of the United States (New York: Oxford University Press, 1985), 203-205; Peter Hall, Cities of Tomorrow (Cambridge, Mass.: Basil Blackwell, 1988), 291.

for racial reasons, especially after the desegregation of public schools in 1954; Washington became majority-black in 1957. Those African Americans who tried to move to the suburbs themselves in the 1950s and 1960s frequently found themselves blocked by discriminatory housing practices both overt (racial covenants) and covert (exclusionary zoning in which large lot sizes and amenity requirements ballooned housing prices in some areas).¹¹⁹

One transportation generation earlier, the trolley had enabled the development or significant growth of streetcar suburbs in both Maryland and Virginia, including Kensington, Garrett Park, Chevy Chase, Riverdale, Hyattsville, Berwyn (all in Maryland), Clarendon, and Ballston (in Virginia).¹²⁰ The postwar housing and road construction boom ushered in a new round of growth, as the populations of Prince George's and Montgomery Counties almost doubled between 1940 and 1950 and Arlington and Fairfax Counties' numbers skyrocketed as well.¹²¹ Ballston housed the first car-oriented shopping mall, Parkington, in 1952, and Maryland followed soon after with the Langley Park Center in 1956.¹²² In 1950, Washington still held 60 percent of

¹¹⁹ Van Dyne, "As Far As The Eye Can See," 92-93; Melder, City of Magnificent Intentions, 504, 548-555. For more on national patterns of discriminatory housing practices, see Kenneth Jackson, 195-217, 242, and Christopher Silver, "The Racial Origins of Zoning: Southern Cities From 1910-40," Planning Perspectives 6 (1991): 189-205.

¹²⁰ Charles Freund, "Washington's Neighborhoods," Washingtonian, March 1983: 186.

¹²¹ Melder, 502. See also Richard Fidler, "County Is Seeing Biggest Building Boom in History," Suburban Record, 16 July 1959: 1.

¹²² *Ibid.*; Freund, 189.

the metropolitan population; by 1953, it held less than 50 percent.¹²³ The 1960 census revealed the first absolute decline in the District's population, and by 1970 its share of the metropolitan population had plunged to barely above 25 percent.¹²⁴

As many Washingtonians moved to the suburbs and newcomers moved there as well, local planning agencies worked to coordinate the development of the region. The National Capital Planning Commission (created by Congress in 1926 as the National Capital Park and Planning Commission), or NCPC, encouraged local jurisdictions to restrict their growth within a framework of wedges and corridors. This was not a new idea, and in fact had been codified in the 1944 Interregional Highways, as Clifford Ellis explains:

Since the existing urban pattern often had a star shape, with the points composed of mass transit or highway corridors, there were "wedges of undeveloped land" between these built-up areas. These areas had remained undeveloped because of poor transportation service, difficult topography, or reservation for public use. The [National Interregional Highway] Committee recommended using these corridors for radial freeways penetrating to the city center. Provision of highways in these wedges would open this land for development, a deliberate strategy designed to achieve a more compact urban pattern.¹²⁵

For the Washington area, the NCPC in 1961 recommended the concentration of high-density growth along six corridors (I-270, U.S. 50, and MD 5 in Maryland, I-66 in Virginia, and I-95 in both states) served by rapid rail and linked by beltways. The open space in the wedges between would be preserved as farmland, woods, or wilderness.

The Maryland-National Capital Park and Planning Commission (M-NCPPC), which

¹²³ Zachary M. Schrag, "Mapping Metro, 1955-1968: Urban, Suburban, and Metropolitan Alternatives," Washington History 13.1 (Spring/Summer 2001): 6; Gillette, "A National Workshop," 11.

¹²⁴ Gillette, "A National Workshop," 11.

¹²⁵ Ellis, Visions of Urban Freeways, 160-161.

coordinated planning for Montgomery and Prince George's Counties, endorsed the wedges and corridors plan the following year and embellished its own plans in 1964.¹²⁶

Wedges and corridors worked well on paper. In fact, the design did enjoy some success, particularly in Maryland, where development clustered around some radials like I-270 and where some parks and green belts were preserved in the wedges.¹²⁷ But like many political boundaries, the lines drawn on paper had little to do with the region's physical geography.¹²⁸ Anne Wilkins, who served on two planning boards at the time of the plan's adoption, explained this deficiency in a 1974 oral history:

Basically, if you took a metropolitan area out in the middle of nowhere, a flat piece of land and adopted the wedges and corridors plan it would be great. We had one problem in Virginia that the plan completely ignored and that was that the watersheds of Fairfax County go in a different direction, then [sic] the transportation plan.¹²⁹

Maryland's topography was better suited to the wedges framework; in Virginia, "the configuration of the land . . . turn[ed] the straight lines into concentric circles."¹³⁰

¹²⁶ Van Dyne, "As Far As The Eye Can See," 98; "Washington, DC: A Second Revolution," The Economist, 16 April 1988, special section: 5-6; National Capital Planning Commission, Plan for the Year 2000, The Nation's Capital (Washington: Government Printing Office, 1961); Maryland-National Capital Park and Planning Commission, On Wedges and Corridors: A General Plan for the Maryland-Washington Regional District In Montgomery and Prince George's Counties, revised ed. (1962; Silver Spring, Md.: M-NCPPC, 1964).

¹²⁷ "Washington, DC: A Second Revolution," 6.

¹²⁸ See the cultural landscape fieldwork model in Appendix A for a discussion of political boundaries.

¹²⁹ "An Interview with Mrs. Anne Wilkins of Bailey's Crossroads, Virginia, interviewed by W. Joseph Coleman on May 20, 1974," Northern Virginia Oral History Project Collection, Special Collections & Archives, George Mason University Libraries, 24.

¹³⁰ "Washington, DC: A Second Revolution," 6.

Somewhat lax state laws also allowed developers to build within the wedges, particularly in Virginia with its strong tradition of property rights. Wilkins recalled:

You've got your highways, your transportation arteries with wedges in between that were supposed to some extent to remain vacant. They overlooked the real economic problem. That it is almost impossible to keep them vacant. You've got a sewer line going this way and a highway going that way. We did it one time—we got a sewer program that provided for something called a limited access sewer. Well, you know how long that remained, not very long. Cause if a sewer line goes through somebody's land you can't prevent him from connecting.¹³¹

Even the Beltway itself, completed three years after the wedges and corridors plan's publication, sparked development within the wedges and away from the corridors.¹³²

Whether ostensibly guided by plan (in the 1960s and beyond) or not, suburban residential and commercial development exploded in the postwar decades, and the region's antiquated road system was hard-pressed to accommodate the new demand.

Getting Around

I have lived in or very close to Washington since I was born, in 1934. I remember, in the 1940s, the paved roads ran in and out of the inner city (like spokes on a wheel). Roads between suburbs were dirt roads in poor condition. To get from one suburb to another (for example, from College Park to Rockville), the quickest route involved driving into Washington and out again (example: driving in Rhode Island Avenue and out Connecticut Avenue. — Joseph T. Marsden, former Hyattsville resident¹³³

For drivers traveling around Washington's suburbs in the 1940s and 50s, road options ranged from bad to worse. Any trip between Maryland and Virginia required

¹³¹ "An Interview with Mrs. Anne Wilkins," 25.

¹³² Van Dyne, "As Far As The Eye Can See," 98.

¹³³ Beltway Survey #609.

passage through downtown Washington, with its traffic signals and city traffic, to reach one of the Potomac River bridges. A few suburban roads did run in partially circular courses, including Glebe Road in Arlington and East-West Highway (constructed beginning in 1928 to connect Bethesda, Chevy Chase, and Silver Spring) and Route 193 in Maryland. But none of these arcs came close to a full circle or connected the two states.¹³⁴

The radials which those partial circles connected could not themselves accommodate the increasing traffic of the time. Some, including U.S. 1 in Maryland and Virginia, dated back to the eighteenth and early nineteenth centuries.¹³⁵ Many were descendants of nineteenth-century turnpikes, which in some cases followed narrow alignments which restricted the possibility of expansion.¹³⁶ These included Prince George's County's Marlboro Turnpike (now MD 4), Montgomery County's Rockville Turnpike (now MD 355, first improved in 1805 over the partial alignment of a Seneca trail), Fairfax County's Little River Turnpike (VA 236, opened 1806), Arlington's Columbia Turnpike (now VA 244), and Fairfax County's Leesburg Pike (now VA 7) and Georgetown Pike (now VA 193), both chartered in 1813.¹³⁷ Other radials into the suburbs were extensions of District roads, including Montgomery County's Connecticut

¹³⁴ Van Dyne, "Getting There," 201.

¹³⁵ Ibid., 126; Community Renewal Program, Prince George's County, Maryland, The Neighborhoods of Prince George's County ([Upper Marlboro, Md.]: The Program, 1974), 56.

¹³⁶ Ross and Nan Netherton, Fairfax County: A Contemporary Portrait (Norfolk, Va.: Donning, 1992), 32.

¹³⁷ Van Dyne, "Getting There," 126; Eileen S. McGuckian, Historic and Architectural Guide to the Rockville Pike (Rockville, Md.: Peerless Rockville Historic Preservation, Ltd., 1997), 1-2.

Avenue, extended north from Dupont Circle in the 1890s, and Georgia Avenue (formerly Seventh Street Extended).¹³⁸

In addition to upgrades of these old roads, new radials were constructed, beginning in the 1930s, to connect Washington more efficiently with its suburbs and with nearby cities. One of these was born when the commandant of the Marine Corps base at Quantico, Va., complained "to the Secretary of the Navy that the congested traffic on Rte. 1 [was] a hindrance to the national defense and should be alleviated by the building of a four-lane highway between himself and the pentagon-shaped War Department building planned for North Arlington."¹³⁹ Virginia Highway Commissioner (1922-1941) Henry Garnett Shirley, on his part, had long believed that Northern Virginia could use an expressway to serve the growing suburban population and to spur further development. Both objectives came together when the Public Roads Administration built what became the Henry G. Shirley Memorial Highway (first VA 350, then I-95, and now I-395 and I-95) "as a war measure to relieve the extremely heavy traffic of thousands of government employees who work in Washington and live in Arlington and Fairfax Counties."¹⁴⁰ In 1944, the first two-and-one-half mile segment of the limited access Shirley Highway opened in Arlington between the Pentagon road system and Route 7; the maze of roads at the Pentagon was called the "mixing bowl" and the "mixmaster" until the Shirley's interchange with the Capital Beltway took over

¹³⁸ Van Dyne, "Getting There," 127-128.

¹³⁹ Donald Smith, "Shirley Highway: A Chronicle of Nightmare Non-Planning," Washington Post, 26 September 1971, Potomac Magazine: 14.

¹⁴⁰ Ibid.; Nan Netherton et al, Fairfax County, Virginia: A History (Fairfax, Va.: Fairfax County Board of Supervisors, 1978), 595-596.

the informal titles.¹⁴¹ By 1951 the highway was extended south to Woodbridge in outlying Prince William County, with extra lanes added repeatedly to accommodate ever-increasing traffic. Still, unlike the older, slow, radials, the Shirley offered at least the possibility of a faster drive, built at a design speed of 70 miles per hour.¹⁴²

While Virginia gained the Shirley Highway to provide traffic relief for old U.S. 1, Maryland constructed the Washington National Pike to offer a high-speed alternative to the Rockville Pike-Wisconsin Avenue corridor to the northwest of Washington. At that time, Wisconsin Avenue was designated U.S. 240 and linked Washington to Frederick, Md. Construction of the new U.S. 240 began in Hyattstown, Md., in 1953, and progressed in five stages southward through dairy farms and small towns until reaching Pooks Hill in Bethesda in 1960, where it would intersect with the future Washington Circumferential Highway (later the Capital Beltway). Figure 2, a 1952 plan of the Maryland State Roads Commission's highway plans, indicates the presence of both the new U.S. 240 and the Beltway well before the creation of the Interstate system four years later. At that time, the Beltway was incorporated into the system as I-495 and the Washington National Pike as I-70S, later I-270.¹⁴³

¹⁴¹ Smith, 15.

¹⁴² Ibid.; Netherton and Netherton, 31; Netherton et al, 596. See also Athelia Knight, "33-Year Road Project Nears Completion," Washington Post, 21 June 1975: B1; and "What's The Name of That Highway, Shirley, 350, 95," Fairfax County Journal-Standard, 20 August 1964: 1.

¹⁴³ Kenneth Bredemier, "I-70S: How Cow Country Became a Corridor City," Washington Post, 31 December 1973: A1; Jack Eisen, "Route I-70S in Maryland Quietly Becomes Known as I-270," Washington Post, 2 March 1975: D3. One major radial which did not predate the Interstate system, and in fact did not open for 15 years after the system's authorization, was I-95 in Maryland, originally known as the Northeastern Expressway between College Park and Baltimore. See "3rd Route to Baltimore Is Put Under Construction," Evening Star, 3 July 1966: A-11; William

In both Maryland and Virginia, the federal government built a series of parkways to connect Washington with federal installations outside it. The Baltimore-Washington Parkway, a replacement for congested U.S. 1, linked Washington with Fort Meade, Beltsville's National Agricultural Research Center, the new town of Greenbelt developed by the Resettlement Administration, and eventually Greenbelt's NASA space flight center and Fort Meade's National Security Agency. Suitland Parkway led to Andrews Air Force Base in Prince George's County. The George Washington Memorial Parkways in both states (the one in Maryland is now the Clara Barton Parkway) went to federal installations in Langley, Va., and Carderock, Md.¹⁴⁴ Still, every one of these additions to the highway network was a radial route, not a cross-county inter-suburban one.

Long-distance travelers thus had to drive into and out of Washington to get to the other side. Area residents did have other options, although the transit routes—first streetcar, then bus by 1962—were for the most part also radial. Four companies provided streetcar and bus service during the Beltway's development. D.C. Transit, which had absorbed dozens of smaller companies dating back to the start of horsecar service in the District in 1862, ran lines in the city and, by the early 1960s, well out into the suburbs in both states. WV&M (Washington Virginia & Maryland Coach Co.), founded in 1926 and subsumed by D.C. Transit in 1964, had routes between the

Taaffe, "I-95 Plods Between Beltways," Evening Star, 7 July 1970: B-1; "Maryland I-95 Stretch is Delayed Until 1971," Evening Star, 26 October 1970: B-3; "I-95 Section to Open Over July 4 Weekend," Washington Post, 22 June 1971: C2; Ivan G. Goldman, "I-95 Leg Opens to Connect D.C., Baltimore Beltways," Washington Post, 2 July 1971: B1.

¹⁴⁴ Van Dyne, "Getting There," 129; Leach, "Fifty Years of Parkway Construction."

District, Arlington, Falls Church, and Fairfax, also expanding farther into the suburbs during the 1960s. AB&W, in service since 1921, ran between Washington, Alexandria, and Arlington. And WMA (Washington Marlboro & Annapolis Motor Lines), created in 1922 as the Bradbury Heights Bus Line, linked Washington with Prince George's and Calvert Counties in Maryland. All of these were consolidated as "Metrobus" under the Washington Metropolitan Area Transit Authority in 1973, after which time redundant routes were gradually eliminated. In all, area residents on all sides of the city had more options for transit than they would decades later, but few opportunities for inter-suburban transit.¹⁴⁵

Pre-Beltway transit was not limited to streetcars or buses. Arthur McClinton, a longtime Northern Virginia resident, recalls:

I worked at Naval Research Laboratory (early 60's) while living in Arlington County. Thus I commuted on a boat from Alexandria to NRL every day. This was a pleasant experience that was unfortunately ended by the construction of the [Beltway's] W[oodrow] W[ilson] bridge and the short lived extension of bus service over the bridge to NRL. The lengthening of my commute by the creation of the WW bridge was over 45 minutes each way. When they canceled the bus for lack of ridership, I bought a car and joined the mad house of commuters. It never was as pleasant as the nice twice daily boat ride.¹⁴⁶

McClinton's "mad house of commuters" did not characterize the area's roads for all residents. Some found pre-Beltway era driving as relaxing as his commute by boat. One man who grew up in Silver Spring remembers that there was "NO TRAFFIC (we used to joke that if a car came northbound on N[ew] H[ampshire] Ave everyone would look

¹⁴⁵ Washington Metropolitan Area Transit Authority, [History of Bus Service in the Washington Region] (Washington: WMATA, 1998), n.p. See also LeRoy O. King Jr., 100 Years of Capital Traction: The Story of Streetcars in the Nation's Capital ([n.p.:] Taylor Publishing Company, 1972).

¹⁴⁶ Beltway Survey #513.

out their window!). . . . My neighborhood was very "country" (eg: milk cows) where the beltway now runs."¹⁴⁷ The Virginia suburbs too were rural: a woman who grew up in Fairfax City and Annandale recalls that

I was 14 in 1964, living in Annandale. When they constructed the intersection at Route 236, the signs pointed in one direction said "Alexandria" and in the other direction, they said "Tyson's Corner." In those days, Tyson's Corner was exactly that -- a corner. There was a butcher shop there that my parents sometimes went to, but it was in the middle of nowhere and there was NOTHING there. We all laughed and laughed that the beltway went to Tyson's Corner!¹⁴⁸

Even where traffic was heavy, the "mad house" atmosphere of later years was not necessarily present. One respondent, who lived in Kensington as a child, enjoyed the slow going:

My Dad worked at the Washington Cathedral, and all us kids went to the Cathedral Schools (with Al Gore and Lucy Bain[e]s Johnson). My brothers and I commuted every day to the Cathedral via Wisconsin Ave, and I remember the traffic being pretty slow because everyone was driving on it. My Dad used to roll down the windows of the old Oldsmobile and sing "On The Road To Mandalay" at top volume to amuse other drivers and embarrass us kids. I remember the drive as fun, as everyone in traffic was usually communicating with other drivers in amusing ways. Much more relaxed.¹⁴⁹

This woman's recollection (dating to 1960) of "everyone . . . usually communicating with other drivers in amusing ways" suggests that drivers' and passengers' attitudes toward traffic may be more a function of prevailing social patterns and expectations than of the intensity of traffic. Decades later, slow traffic in the Washington area does not tend to produce relaxed or friendly drivers communicating with each other; the

¹⁴⁷ Beltway Survey #476.

¹⁴⁸ Beltway Survey #435.

¹⁴⁹ Beltway Survey #574.

respondent seems to recall a time when the drivers she observed were more comfortable interacting and did not place such a premium on punctuality above all else.

But if the area's roads in the 1950s and early 1960s were relaxing for some in certain parts of the region, they were crowded and a major irritation for many others. For one thing, traveling from almost anywhere to almost anywhere else required a trip into the District. Whether between states—"from College Park to Mount Vernon was all down Route 1 [and through the city]"—or within them, all roads led to Washington.¹⁵⁰ Even the engineers building the Beltway specifically to address this concern ran into it daily. To travel around the Maryland suburbs, one engineer recalled, a side trip through the District was necessary:

[F]or example, before the Beltway was built, you wanted to go from Laurel to Oxon Hill, you had to use Minnesota Avenue in the District and it wasn't a very wholesome experience, to say the least. Even when we were building it [the Beltway], in the first stages when construction had just started, you couldn't run down the alignment, you had to go by the street system. And we had projects on [Maryland] Route 5 at the time [to the city's southeast]; the district engineer's office was in Laurel [to the north]. And there was just no easy way to get anywhere. But the Beltway subtracted all that . . .¹⁵¹

Traveling from a suburb to outside the area also frequently required passing through the city. An alumnus of the University of Maryland's track team (1957-61) remembers nearly nine-hour-long trips to Chapel Hill, N.C., drives lengthened by the slow ride south on U.S. 1 through the District.¹⁵² From southern suburbs to points north was much the same. Keith Willis writes of traveling to New England from a southeastern Maryland suburb:

¹⁵⁰ Beltway Survey #487.

¹⁵¹ Interview with M. Slade Caltrider, 28 September 2000.

¹⁵² Beltway Survey #229.

I lived in Camp Springs, MD before Beltway opened near where Branch AV. exit is now. We often traveled to New England for visits. This entailed going through the District to get to Balto-Wash Parkway and timewise made the trip much longer. It was easy to get lost going through the District.¹⁵³

In fact, simply crossing the Potomac between Virginia and Maryland entailed a visit to Washington: one longtime area resident "remember[s] having to use the DC bridges to get across the Potomac unless you wanted to go all the way to Point of Rocks [far to the northwest]."¹⁵⁴ These recollections about "having to use" the D.C. bridges and "ha[ving] to use Minnesota Avenue" suggest that passage through Washington was not a shortcut, as it would become for some years later, but a necessity for trips around the region.

It was not just the nuisance of driving out of the way that frustrated local drivers. Perceived danger was an issue for Sandra J. Saunders, who remembers "having to go through very poor and trashy parts of Washington DC and no matter what time of year it was, we had to lock our doors and roll up our windows."¹⁵⁵ Bud Lewis, living in Northern Virginia, was frustrated by the difficulty of navigating within the District, recalling the hours lost while

[t]rying to follow a major route through the district without winding up in the wrong lane and then becoming hopelessly lost while trying to make a simple "go 'round the block" maneuver used elsewhere in the northeastern states to get back on a (poorly) marked highway. . . . I would rather have tried to ford the Potomac than go through the city again.¹⁵⁶

The amount of time it took—or seemed to take—to get anywhere was a major source of irritation. Driving east from Bethesda to Annapolis and Ocean City, Doug Osmond and

¹⁵³ Beltway Survey #391.

¹⁵⁴ Beltway Survey #596.

¹⁵⁵ Beltway Survey #587.

¹⁵⁶ Beltway Survey #526.

his family "would go through Beach Dr in Rock Creek, and wind around all sorts of ways, to get over to Rt 50 and it seemed to take forever."¹⁵⁷ A former Hyattsville, Md. resident recalls that "[w]hen I was little (1950's) going to Ocean City was an all-day trip. Heck, going to the eastern shore was a ¾ day trip."¹⁵⁸ Driving west was no faster: a former Wheaton resident considered the drive to friends in Falls Church, Va., "a real expedition . . . almost two hours, so when the beltway opened, it became a 45 minute ride."¹⁵⁹

Some area residents developed means of coping with the frustrations of limited route alternatives. One former District resident and her friends "found shortcuts or others found shortcuts through the city that we all used."¹⁶⁰ Sandy D'Orazio's family found an educational opportunity hiding in their inter-suburban trips through Washington:

I remember going from Alexandria to my uncle's in Wheaton and we had to go through DC (twice a month). My folks would ask us questions about this building or that landmark. When we knew all the answers, my dad would take another way through DC to teach us about some more stuff.¹⁶¹

But for the most part, area drivers seemed happier to have more efficient options available to them. None of my survey respondents who were area residents in 1964 reported being disappointed by the arrival of the Beltway (in its context of facilitating traffic). The new circumferential offered the first significant correction to the shortage

¹⁵⁷ Beltway Survey #265.

¹⁵⁸ Beltway Survey #372.

¹⁵⁹ Beltway Survey #188.

¹⁶⁰ Beltway Survey #135.

¹⁶¹ Beltway Survey #338.

of inter-suburban travel options provided by existing roads and transit routes, and local drivers were all too willing to take advantage of the improvement, as detailed in the next chapter.

Washington's Other Beltways

In this study I refer to the Capital Beltway interchangeably as "the Beltway," and the road has similarly entered the national lexicon in the same shorthand form. But it was not intended to be the single beltway around Washington, although it ended up playing that role: area planners proposed a total of five rings inside and around the city to alleviate the frustrations drivers felt before 1964 (and, in some cases, to allow for the traffic which would follow from future development). The other four circumferentials, and in fact dozens of miles of other proposed highways which similarly went unbuilt, are "absent components" as described in the fifth operation of the cultural landscape study model: their significance lies in their absence rather than their presence. If the Capital Beltway did not provide a lasting panacea to drivers' concerns, the road itself is not entirely to blame; it was not supposed to do the job by itself.

I will later discuss other factors contributing to the Beltway's downward slide in serving as an efficient transportation option; for now, I look briefly at what happened to Washington's other beltways. Although initial plans for concentric rings around the city came in 1950, an earlier, informal proposal for an inter-suburban loop, immediately outside the District, appeared in 1913 in a magazine published by the League of

American Wheelmen, a group of cyclists who in the 1880s became the first organized highway lobby pushing for improved roads:

Prominent citizens of Virginia are considering a proposition to construct a boulevard 40 miles long, around the original 10-mile square which comprised the District of Columbia as laid out by George Washington in making his original survey of the district. It is proposed that Maryland and Virginia each donate sufficient land for the boulevard, and aid in the work of construction.¹⁶²

This proposal went nowhere. In 1932 a joint committee of highway officials from Maryland, Virginia, and the District proposed a set of bypass routes around the city, with bridges at Alexandria and Great Falls. These bypasses, however, did not form a full ring and were not approved by any political authority. Another regional highway planning committee was formed in 1939, but its efforts were stopped by World War II.¹⁶³

The Bureau of Public Roads and Harland Bartholomew share responsibility for the first stirrings of what became the region's beltway blueprints. In 1948 the BPR used the Washington area for its first major origin-destination survey, in which motorists were asked about their commuting patterns. As the Bureau staff began to plot out the travel demand patterns from the collected data, the idea of what became the present Capital Beltway "just sort of popped out at us," according to Douglas Brinkley, who served as the District's chief of highway planning in the 1940s and 50s.¹⁶⁴

¹⁶² "Proposed Boulevard Around Washington, D.C.," Good Roads, 7 June 1913: 319. I thank Richard F. Weingroff of the Federal Highway Administration for bringing this early proposal to my attention.

¹⁶³ "Beltway Built With Unity of Area Officials," Evening Star, 16 August 1964: E-3.

¹⁶⁴ Ibid.

Four years earlier, the federal government's second report on a national highway network had introduced the idea of a set of concentric circles. The National Interregional Highway Committee wrote in the 1944 Interregional Highways:

In the larger cities more than one circumferential route may be needed. A series of them may be provided to form inner and outer belts, some possibly within the city itself, others without. In the largest cities one such route may be required as a distributor of traffic around the business center.¹⁶⁵

During the discussions leading up to the document's publication, St. Louis planner Harland Bartholomew sold the rest of the Committee on the idea of circumferentials and especially of rings within city boundaries.¹⁶⁶

Six years later, the 1950 comprehensive plan for Washington produced by the National Capital Planning Commission—by then chaired by Bartholomew—included three ring roads (Fig. 3).¹⁶⁷ The three loops introduced into the plan by Bartholomew and pictured in the plan's map circled the White House at radii of a half-mile, three to six miles, and (outside the District) six to ten miles. Both the Washington Metropolitan Chapter of the American Institute of Architects and the transportation subcommittee of the Committee of 100 on the Federal City (a voluntary civic organization) endorsed the ring road concept by 1952. The Committee of 100's endorsement noted that Washington residents might question the need for a series of rings, but "unless people from an ever-expanding trade territory outside the District are brought to its center expeditiously—

¹⁶⁵ U.S. Congress, Interregional Highways, 65.

¹⁶⁶ Gillette, "A National Workshop," 15.

¹⁶⁷ Ibid.; National Capital Planning Commission, Plan for the Year 2000, The Nation's Capital (Washington: Government Printing Office, 1961). For further discussion of Harland Bartholomew's contributions to metropolitan Washington's transportation planning, see Schrag, "Mapping Metro," 6-11.

and accommodated comfortably when they get there—the city's economic and cultural life will dry up and its residents will have little reason for remaining."¹⁶⁸

The first of the three proposed ring roads, closest to the White House, was known as the Inner Loop. Back in 1942, District highway planners had submitted a proposal to Congress for a series of depressed highways, underpasses, and Potomac River bridges to create a ring around the central city.¹⁶⁹ A 1944 engineering study for the District offered the first detailed plan for such an inner loop to relieve downtown streets of their "unwarranted burden of traffic, most of which is passing through to areas of Federal buildings adjoining the central area on several sides."¹⁷⁰ The report differentiated between a bypass loop, which would not work in such a constricted area, and a "traffic distributor forming [a] belt line," which would:

There is a sharp distinction between by-pass routes and such distributors. Whereas by-passes carry vehicles completely around areas of congestion, distributors carry vehicles at reasonably high speeds to points nearest their ultimate destination before they enter the zone of slower speeds and greater congestion. The result is a minimum of mileage for each individual driver, and a net reduction of traffic within the area.¹⁷¹

The 1944 proposal suggested creating such a belt-line distributor through the "preferential treatment of streets" which for the most part already existed, a strategy which today would fall under the rubric of transportation supply and demand

¹⁶⁸ Quoted in Gillette, "A National Workshop," 15.

¹⁶⁹ Gilbert Gimble, "Critical Decision Near on Inner Loop Future," Evening Star, 7 November 1961: B-1.

¹⁷⁰ J.E. Greiner Company and De Leuw, Cather & Company, Transportation Survey and Plan for the Central Area of Washington, D.C. (Washington: Department of Highways and Department of Vehicles and Traffic, 1944), 18.

¹⁷¹ *Ibid.*, 18-19.

management. "The only requirement," the J.E. Greiner engineering consultants wrote, "is to make [the roads] so attractive that motorists will use them in preference to streets which pass through the heart of the downtown area." Beyond a few new or widened streets, the loop would be created through improvements to "signal timing, protection by stop signs, provision of modern traffic safety lighting, lane markings, and other expedients to make them of maximum attractiveness to the motoring public."¹⁷²

That version of the Inner Loop lay dormant. But the NCPC's 1950 comprehensive plan retained the idea of a central ring serving the same purpose, to siphon off approximately 25 percent of the traffic from gridlocked downtown streets. The NCPC endorsed the Inner Loop again in 1954, 1959, and 1961 plans, and the De Leuw, Cather engineering firm defined route alternatives beginning in 1955. No longer simply a set of roadway improvements, the Inner Loop would now be an expressway built from scratch.¹⁷³

In 1961, the NCPC ran into problems grounded in the basic foundation of urban freeway planning, and as a result, the Inner Loop which commission chair Harland Bartholomew continued to promote was cancelled because of a weakness in the definition of intra-city beltways which he had helped write two decades earlier. The 1944 Interregional Highways report, which Bartholomew co-authored, recognized the potential for this kind of inner loop, and gave these suggestions:

In some cases it may be feasible to construct the distributing belt line within the city—generally somewhere within the ring of decadent property surrounding the central business area. Such a belt line, connecting at appropriate points with radial arteries extending out of the city, may avoid

¹⁷² Ibid., 19.

¹⁷³ Gimble, "Critical Decision."

the cutting of a new route directly through the business sections, and may either serve as a substitute or supplement for the outer belt line.¹⁷⁴

The key word here is "decadent." The earlier Bureau of Public Roads report, Toll Roads and Free Roads, had in 1939 explained that "decadent property" referred to old urban areas dating to the nineteenth century and containing "countless impediments that embarrass the movement of twentieth-century traffic."¹⁷⁵ From this perspective, the Interregional Highways excerpt can be understood to suggest building inner loops explicitly across poor areas of the inner city in order to avoid wealthier commercial areas.

This line of thinking characterized highway planning in the 1940s and 1950s, but no longer worked by 1961. After a decade of rubber stamping Inner Loop proposals, the NCPD held up full approval in October, 1961, after member Alexander C. Robinson III, a Cleveland architect, questioned the highway's eventual impact on Washington based on how he had seen expressways create physical gashes in his own city. The American Institute of Architects and the Committee of 100 also challenged the loop and other proposed freeways, arguing that such an approach to traffic problems was outdated and that dealing with "decadent property" by razing it for freeways had the very real effect of uprooting families and destroying neighborhoods. While the Metropolitan Washington Board of Trade and some highway planners continued to push for the Inner Loop, it never regained full support and was eventually dropped from

¹⁷⁴ U.S. Congress, Interregional Highways, 97.

¹⁷⁵ U.S. Congress, Toll Roads and Free Roads, 99. See also Ellis, "Visions of Urban Freeways," 149.

consideration.¹⁷⁶ A few portions, which were built before support for the full ring collapsed, serve traffic today, including the former Center Leg (the northern spur of I-395) and the South Leg (I-395, the Southeast and Southwest Freeways).

Outside the Inner Loop, the NCPC's 1950 comprehensive plan (Fig. 3) depicted a second, or intermediate, ring road just inside the District's borders. This intermediate loop was a revival of a much older proposal, a plan to link the sites of 21 Civil War forts inside the city's perimeter, first articulated around 1880 and formally proposed in a city development plan in 1901.¹⁷⁷ Until the 1930s, Washington planners saw this "Fort Drive" as a tourist attraction and a backbone for park development. Playing up the road's tourism potential, the Washington Board of Trade in 1922 endorsed "a boulevard connecting [the] forts as well as a driveway along the ridge overlooking the District and Maryland's valleys."¹⁷⁸

Fort Drive's potential grew after Congress authorized the purchase of right-of-way in 1930. Planners in the 1940s, following the framework of belt-line distributors laid out in Interregional Highways, saw in the intermediate loop an opportunity to draw traffic off the city's congested streets; Fort Drive, if built as an expressway, could serve tourists and alleviate gridlock simultaneously. The NCPC (then still the NCPPC, or

¹⁷⁶ Gimble, "Critical Decision."

¹⁷⁷ For full descriptions and locations of Washington's several dozen Civil War forts, see Benjamin Franklin Cooling III and Walter H. Owen II, Mr. Lincoln's Forts: A Guide to the Civil War Defenses of Washington (Shippensburg, Pa.: White Mane Publishing Company, 1988).

¹⁷⁸ Jessica Ivy Elfenbein, Civics, Commerce, and Community: The History of the Greater Washington Board of Trade, 1889-1989 (Dubuque, Ia.: Kendall-Hunt, 1990), 34; James G. Deane, "1901 Plan for Linking Forts Revived as an Aid to Traffic," Evening Star, 2 March 1952: A-8.

National Capital Park and Planning Commission) purchased 98 percent of the required right of way by 1952 for the four-lane, limited-access highway (Fig. 4). But District Budget Officer Walter Fowler's 1947 prediction that the road would "never [be] built because there is no need for it and there will be no money for it" turned out to be prescient. In the end, the only portion built was an improvement to Military Road crossing Rock Creek Park.¹⁷⁹

The Inner Loop, Fort Drive, and the Washington Circumferential Freeway (which became the Capital Beltway) comprised the concentric rings in the NCPC's 1950 comprehensive plan. Even before the Inner Loop was dropped in the 1960s, a fourth beltway, farther out in the suburbs, had made its way into regional plans. A 1955 progress report published by the M-NCPPC (Fig. 5) shows Maryland's portions of what appears to be Fort Drive, the Inter County Belt Highway (Capital Beltway), and beyond that an "Outer Circumferential Freeway," labeled elsewhere as "Outer Circumferential #4."¹⁸⁰ This Outer Beltway became the most controversial road in the history of the Washington suburbs, with its future still unresolved a half-century later. After highway officials in Maryland and Virginia designed their respective segments of the expressway, the Outer Beltway was dropped from regional plans in 1970 (in part due to

¹⁷⁹ Deane, "1901 Plan." See also U.S. Congress, Washington Metropolitan Area Transportation Problems: Hearings Before the Joint Committee on Washington Metropolitan Problems, 85th Congress, 2d sess., 1958, 105-109.

¹⁸⁰ Maryland-National Capital Park and Planning Commission, M-NCPPC Annual Report No. 30 (Riverdale, Md.: M-NCPPC, 1957), 19.

Montgomery County's refusal to allow construction over its relatively undeveloped western section).¹⁸¹

A formal study of a portion of the Outer Beltway in Maryland, newly dubbed the Inter-County Connector (ICC), began in 1979 and was abandoned in 1989. Another ICC study ran from 1993 to 1998, at which point Maryland Governor Parris N. Glendening dropped plans for the road. Glendening subsequently reopened discussion before abandoning it again in 1999—but even then, state officials refused to relinquish control over the right-of-way held for decades in anticipation of the highway's construction, even as the Montgomery County Council was prepared to sell the right-of-way or convert it into a park. Meanwhile, the Greater Washington Board of Trade in 1986 revived plans for a full, 150-mile Outer Beltway, but lack of support from local jurisdictions killed that effort. The story of the Outer Beltway and its successors, the Inter-County Connector and Virginia's Western Transportation Corridor, requires its own study, which will have to wait for a later time. As I write this in 2002, all iterations of the Outer Beltway are officially dormant, but Maryland highway officials, with the support of other ICC proponents, continue to sit on the reserved land with an eye to the future when a different state administration might reopen the fifty-year-old highway plan yet again. In December 2001, Lieutenant Governor Kathleen Kennedy Townsend

¹⁸¹ Karl Vick, "Md. Tollway Remains a Road Not Taken," Washington Post, 3 February 1997: A1. See also Maryland State Roads Commission and Maryland-National Capital Park and Planning Commission, Corridor Feasibility Study for the Outer Circumferential Freeway in Montgomery County, Maryland (Maryland State Roads Commission, 1969).

announced that she would be willing to consider reviving the ICC if elected governor in late 2002.¹⁸²

Yet another beltway even farther into the suburbs appeared in regional plans in the early 1960s. By the time an engineering consultants' report came out in 1964, the Inner Loop and Fort Drive had vanished from the drawing board, so the new beltway, a 165-mile ring 25 miles from the White House, became the "Third Circumferential Highway" after the Capital Beltway and the Outer Beltway. Officials in Prince William County, Va., initiated this proposal with plans for a cross-county highway parallel to the Outer Beltway, and the M-NCPPC extended the arc into a full circle around Washington.¹⁸³

The 1964 report shows the Third Circumferential running to the north along the MD 100 corridor in Howard County, to the southeast near La Plata in Charles County, to the west through Loudoun County and southwest of Manassas, and to the south near Quantico. The beltway would more or less delineate the farthest reaches of the Washington region; the engineering consultants suggested "deliberately placing the road in Calvert County, to bring that county into the metropolitan orbit." But by 1968,

¹⁸² Ibid.; Daniel LeDuc, "Governor Abandons Road Plan," Washington Post, 7 March 1998: D1; Alan Sipress, "Glendening Kills Intercounty Connector," Washington Post, 23 September 1999: A1; Scott Wilson, "Md. Connector Road May Get a Reprieve: Political Leaders Vow to Hold On to Land," Washington Post, 25 September 1999: A1; Daniel LeDuc, "'Grumpy' Comptroller Lets Road Rage Erupt," Washington Post, 19 October 1999: B1; Amy Argetsinger, "Montgomery Won't Sell Its Connector Property," Washington Post, 5 February 2000: B1; Steven T. Dennis, "Council Backs Off Park Designation for ICC Land," Chevy Chase Gazette, 19 January 2000: A-19; Daniel LeDuc, "Townsend Revives Debate Over Highway," Washington Post, 11 December 2001: B5; Matthew Mosk, "Top Lawmakers Give a Boost to Connector Road," Washington Post, 26 January 2002: B4.

¹⁸³ Paul Hodge, "3d Beltway Idea Belted by Planner," Washington Post, 18 November 1968.

numerous civic groups and chief planners for Howard County and the M-NCPPC had voiced their opposition to the proposal, mostly based on fears of higher-density development in outlying areas, and the Third Circumferential Highway quietly disappeared.¹⁸⁴

For different reasons in each case, the first, second, fourth, and fifth proposed ring roads were never built. While highway engineers built new radials (in the suburbs) and improved old ones (in the city and suburbs), the series of concentric rings proposed to connect them never materialized. One beltway alone materialized from the plans; in the next chapter, I look at how the Capital Beltway managed to achieve substance when its four sisters did not.

¹⁸⁴ Ibid.; Harold Bartholomew and Associates, Third Belt Highway, Washington D.C. Metropolitan Area: A Prospectus (Washington, D.C., 1964).

CHAPTER 4

"A HUGE WEDDING RING FOR METROPOLITAN WASHINGTON":

THE COMING OF THE CAPITAL BELTWAY

Almost never do Americans realize the vagueness investing the very name of the limited-access highway system, let alone the origin of the system in Cold War murk. . . . It exists as a weapon, and like everything military, it exists for straightforward reasons, not pleasant ones perhaps, but straightforward nonetheless.¹⁸⁵

In the late 1930s, the construction of the Pennsylvania Turnpike heralded a new era of toll road development, harkening back to the turnpike era of 1790 to 1850 when over 400 turnpikes criss-crossed the eastern portion of the country.¹⁸⁶ Engineers and drivers alike hailed the new highway as a sign of things to come; with its few points of access, its broad lanes and medians, its minimal grade, and its frequently arrow-straight alignment, the turnpike provided welcome traffic relief from narrow, mountainous older roads.¹⁸⁷ Maine, New Jersey, Ohio, and numerous other states followed Pennsylvania's lead in creating quality highways without draining state treasuries, by establishing

¹⁸⁵ Stilgoe, Outside Lies Magic, 91.

¹⁸⁶ Daniel B. Klein, "The Voluntary Provision of Public Goods? The Turnpike Companies of Early America," Economic Inquiry 28 (October 1990): 798-799. Connecticut's Merritt Parkway (1937) preceded the Pennsylvania, but was closed to trucks and did not accommodate commercial traffic; see Jose A. Gomez-Ibanez and John R. Meyer, Going Private: The International Experience with Transport Privatization (Washington: Brookings Institution, 1993), 166.

¹⁸⁷ Dan Cupper, The Pennsylvania Turnpike: A History, revised ed. (Lebanon, Pa.: Applied Arts Publishers, 1995); Kaszynski, The American Highway, 126-128.

turnpike authorities which designed and built new roads funded by revenue bonds amortized by future tolls.¹⁸⁸

The Pennsylvania Turnpike led the way, but in more ways than were first apparent. Both army officials and the German Wehrmacht kept a close eye through the late 1930s on the turnpike's development, recognizing "the defensive and offensive capabilities of a limited-access, split-lane highway system designed for military vehicles."¹⁸⁹ Pentagon officials had already seen, and respected, how efficiently German armored divisions moved along that country's divided highways.¹⁹⁰ The Pennsylvania Turnpike provided the first concrete example of similar potential in the United States.

That potential became significant as the Cold War developed and intensified. Vehicles moved fast and freely along the Pennsylvania Turnpike and other new toll roads; a broader network of similar highways could serve as an unprecedented strategic tool. After all, if armored vehicles carrying guided missiles could roam at will around an extensive highway system, chances were slim that enemy attacks could target them. Military officials already knew, from destroying German and Japanese airfields during World War II, that bulldozers could fill in a day the holes in highways created by bombs, so American expressways would be effectively impervious to conventional warfare. Even damage from atomic bombs (excepting radiation), officials believed, could be fixed within a day or two. Long and straight sections of highway also served as

¹⁸⁸ American Public Works Association, History of Public Works in the United States, 1776-1976 (Chicago: American Public Works Association, 1976), 90; Jeremy L. Korr, "Toll Bridges and Roads," in Dictionary of American History, 3d. ed., ed. Stanley I. Kutler (New York: Charles Scribner's Sons, forthcoming).

¹⁸⁹ Stilgoe, 92.

¹⁹⁰ *Ibid.*, 93.

ideal backup landing strips for military planes.¹⁹¹ A grid of Pennsylvania Turnpikes, in other words, was seen as a valuable strategic tool for the national military.

However, the United States government is explicitly prohibited from building roads. The Constitution forbids this of Congress because road creation is, as noted earlier by J.B. Jackson, "the first step toward creating a tyrannical, centralizing national government."¹⁹² Congress may establish a road, or declare one to be a national highway, but it cannot actually build the road under its own authority. All of this assumes that a road is a venue for accommodating normal traffic. But if the road instead serves as a weapon, then is it still a road as such?

The negotiations preceding the passage of the 1956 Federal-Aid Highway Act, which established the National System of Interstate and Defense Highways, focused heavily on the highways' dual potential to provide traffic relief and to contribute to national defense. Skirting the issue of whether the federal government can build roads under any circumstances, the 1956 legislation set up a highway system which Pentagon officials and civil engineers of each state would work together to design; the states would be responsible for letting construction contracts for highways which would follow federally-specified standards.¹⁹³ The Interstate highway system was then, as it is now, a massive offensive and defensive weapon as well as a panacea (in the best cases) for traffic congestion on other roads.

¹⁹¹ Ibid., 93-95.

¹⁹² Ibid., 93.

¹⁹³ Ibid., 93-94.

Interstates were intended to serve as emergency evacuation routes from cities for residents.¹⁹⁴ More importantly, from an offensive standpoint, was their provision of bypass routes around heavy city traffic. Francis C. Turner, who helped design the system and who later became Federal Highway Administrator, explained that "[t]he concept was that every major city had to have not only a route that penetrated the city but routes around the city. . . . So in case a bomb dropped, like in Hiroshima, the military needed a route to go around the city, to bypass it."¹⁹⁵ The Beltway's origin lies in this argument. Although Maryland highway officials had already proposed at least a partial circumferential highway around Washington for traffic mitigation purposes, it was the fear of a Cold War attack on the nation's capital—not Harland Bartholomew's vision of regional planning via concentric circumferential highways, nor the need for cross-county traffic relief—which provided the immediate impetus for the development of what became the Capital Beltway.

Military leaders assumed that a nuclear hit on Washington would create massive rubble which would block the area's roads. A bypass highway well outside the city "would give the tanks from Fort Belvoir, say, a route north to cut off an aggressor force."¹⁹⁶ In February 1952, Senator Francis Case of South Dakota sponsored an amendment to the pending 1952 Federal-Aid Highway Act authorizing a circumferential highway around Washington for this purpose. The Senate Public Works

¹⁹⁴ Ellis, "Visions of Urban Freeways," 234.

¹⁹⁵ Douglas B. Feaver, "Washington's Main Drag," Washington Post, 30 August 1999: A12.

¹⁹⁶ David R. Boldt, "Beltway: Planning Problem," Washington Post, 26 December 1972: B5.

Subcommittee heard testimony on behalf of Case's amendment from W.E. Reynolds commissioner of public buildings for the General Services Administration; Kenneth Chacey, highway engineer of the Army's Office of Chief of Transportation; John Nolan, Jr., director of planning for the NCPPC; Fred W. Tuemmler, director of planning for the M-NCPPC; and S.R. Harrison, the District's engineer of streets. These officials stressed that while the circumferential would relieve local traffic congestion, it would also constitute a vital link in the national defense infrastructure in conjunction with the extant Shirley Highway and Baltimore-Washington Parkway. Accounts of the Case amendment are unclear as to whether a full beltway was under consideration: one newspaper report describes "[t]he belt road would start at the Washington-Baltimore parkway, form a crescent around the city and connect with the Shirley highway, also serving the new Washington airport at Burke, Va. [emphasis added]."¹⁹⁷

While the Case amendment, which would have authorized \$36 million for the new circumferential, was apparently not approved, it did bring the proposal for at least one ring road around Washington to the immediate attention of local and federal officials. Here a question remains: would the highway have worked as a military tool as originally proposed during testimony over the Case amendment? Its success would have depended on, first, whether it would be any help in the face of a nuclear attack, and second, whether it could accommodate both resident traffic fleeing the city and military traffic moving around it.

On the first count, the chances of the proposed beltway being of any help are dubious. A 1981 analysis estimated that a one-megaton surface blast from a nuclear

¹⁹⁷ Harold B. Rogers, "GSA Advocates Belt Highway Around D.C.," Evening Star, 19 February 1952: B-1.

bomb detonated at the White House would kill 98 percent of the people within approximately a one-mile radius, 50 percent of the people within three miles, and virtually no one (but would injure 25 percent of the people) six to eight miles away. However, a one-megaton air blast would kill twice as many people, and a 25-megaton air blast would kill over 90 percent of the people within what is now the Capital Beltway. Except for the weakest cases of a nuclear attack, then, a bomb's damage would take effect too quickly for an escape route to be of use.¹⁹⁸

Yet even if the effects of such an attack spread slowly, it is hard to believe that the Capital Beltway could handle the civilian and military traffic fleeing or evading the city. Apparently unaware of the Beltway's originally proposed purpose, a Northern Virginia resident wrote in 2000: "I sometimes wonder how this area would cope with a major disaster if we had to depend on our transportation system to move people in an emergency."¹⁹⁹ This fear is well founded. By 1969, only five years after the Capital Beltway opened, planning officials cited its congestion, and its resulting inability to contribute effectively to the national defense system, as a justification for building the Outer Beltway:

The Highway Act of 1956 authorized by Congress declared that the early completion of the "Interstate System" was essential to the national interest. Although the Outer Circumferential Freeway is not part of the currently conceived Interstate System, it provides a vital and necessary link in the overall highway network. Since the Capital Beltway (I-495) is a part of the Interstate System and is becoming more overloaded with traffic, much of which is local in nature, a new facility has to be found if we are to provide a good defense highway for the Washington Metropolitan area. The Outer

¹⁹⁸ Tad Szulc, "The Unthinkable," Washingtonian, June 1981: 108.

¹⁹⁹ Douglas Goodgion, letter to the editor, Washington Post, 13 March 2000: A16.

Circumferential Freeway will satisfactorily serve this function.²⁰⁰

The Capital Beltway remains a key component of the Interstate system, but its utility as a defense highway has yet to be tested, some fifty years after its proposal as such.

In his history of the development of the Interstate Highway System, Bruce Seely writes that "[p]ainting highway congestion as a military problem . . . added highly visible urgency to road building. These arguments, however, never altered the nature of highway policy. Rather, they provided an easily understood justification for larger highway programs."²⁰¹ Seely may be mistaken. On a national scale, highway policy is affected by military concerns when Interstates (usually in rural areas) are used very much in their identity as defense highways: for military aircraft to practice emergency landings, for the planes to deploy during a military intervention, for reserve units to travel en masse from point to point.²⁰² In Washington, discussion of the proposed Beltway's military benefits elevated the highway from one of several loops on a planning map to a seriously considered construction project. With the idea still fresh after the 1952 Case amendment, the M-NCPPC included the Beltway on a planning map later that year, and the National Capital Region Planning Council endorsed it in 1953.²⁰³

Finally, on March 15, 1954, more than 50 officials from the District, Maryland, and Virginia met at the Hotel Statler to discuss the need for and viability of that

²⁰⁰ Maryland State Roads Commission and Maryland-National Capital Park and Planning Commission, Corridor Feasibility Study, 12.

²⁰¹ Seely, Building the American Highway System, 203.

²⁰² Stilgoe, 95.

²⁰³ DO IT Coalition, "The Capital Beltway Owner's Manual," brochure, 1988.

particular circumferential highway. By the time the meeting adjourned, plans for the Capital Beltway had been set in motion. The officials agreed to develop a "belt highway" which would cross the Potomac River at a specific location near Jones Point (now the Woodrow Wilson Bridge) and near Cabin John, Md., at a site to be determined. The Maryland State Roads Commission (SRC), represented by chair Russell H. McCain, was prepared to begin construction of its 33-mile portion at a cost of about \$33 million. (Because this meeting predated by two years the establishment of the Interstate system, the 90-10 federal funding formula was not yet in effect.) Virginia's Department of Highways (VDH) had not decided how to finance its section, but assistant chief engineer Burton Marye was confident that the state would soon work out the details and begin construction.²⁰⁴

At that meeting, both states and the District pledged to cooperate in making the Beltway a reality. In this and the following two chapters, I look at both parts of that action. First, I examine how the Beltway came to fruition in Maryland and in Virginia. In discussing the engineering, design, and construction processes, I address the second operation in the cultural landscape study model by exploring how the Beltway's boundaries were created and how draftsmen and engineers perceived them as abstract and experiential, respectively. The same discussion, which focuses in depth on how draftsmen and engineers worked on the highway, speaks to the fifth operation of the study model which encourages analysis of the technology used to shape a given landscape. I also look (briefly here, then in depth in Chapter 5) at how the Beltway's development played out in the lives of area residents who suddenly found large clear-

²⁰⁴ "Belt Highway Vital, D.C. and Two States Agree," Evening Star, 16 March 1954: B-1.

cuts, and then an expressway, in their neighborhoods. This chapter concludes with discussion of the Beltway's opening in 1964 and the immediate aftermath.

Through this chapter and later in greater depth in Chapter 6, I also focus on the second part of the 1954 meeting's action, assessing how effectively the three jurisdictions (especially Maryland and Virginia) followed through on their initial pledge to cooperate with respect to the Beltway. A 1958 M-NCPPC report on the Beltway's early progress explained that "[t]he Circumferential will arc through both Montgomery and Prince George's Counties and will connect with a similar roadway in Virginia [emphasis added]."²⁰⁵ Why "will connect with a similar roadway" and not "will continue through Virginia"? Was the Beltway a single highway, or in fact two distinct somewhat similar roads? What are the implications in either case—in short, why and how has it mattered? These next chapters reveal similarities and differences between the Beltway's portions in both states, in both its planning process and physical appearance, and explore the ways in which these characteristics and comparisons are relevant.

The Washington Circumferential Highway in Maryland

Before the 1950s, the city of College Park, unincorporated until 1945, was more representative of its earlier name than it was of a full-fledged city. The community began around 1860 as a smattering of houses for instructors at the Maryland Agricultural College (now the University of Maryland), clustered around an old county road near the B & O railroad stop called College Station, a name the neighborhood

²⁰⁵ Maryland-National Capital Park and Planning Commission, Annual Report 31 (Riverdale, Md.: M-NCPPC, 1958), 14.

appropriated. Well into the twentieth century, College Park remained highly residential. Some services for motorists and university students developed along U.S. 1, which followed an eighteenth-century post road, but for the most part residents and students went to Hyattsville or Washington for serious shopping.²⁰⁶

This changed in 1951. Harry A. Rosenfeld, a Washington-based real estate agent, purchased a plot of undeveloped land at the corner of Knox Road and Baltimore Boulevard (U.S. 1), and built the city's first modern suburban shopping center. An ad placed in a University of Maryland student magazine in May 1951 announced the upcoming July "gala opening of College Park's most complete shopping center," featuring, among other services, a Woolworth's, a People's Drug Store, a Hot Shoppe restaurant, several clothing stores, a bank, and a supermarket. The "College Park Business Center" also offered a ballroom and two floors of office space. "The location was superb," according to the magazine's coverage, given its proximity to the main traffic arteries of U.S. 1 and Route 193.²⁰⁷

Evidently the management of Michael Baker, Jr. agreed. In April 1954, the Pennsylvania-based engineering firm opened a branch office on the third floor of the new College Park Business Center. Maryland's State Roads Commission (SRC) had selected Baker to design its portion of the Capital Beltway, following up on rough alignments drawn in 1952 by the M-NCPPC before the state had officially approved the

²⁰⁶ See T. Raymond Burch, History and Development of the City of College Park, Berwyn Heights, Greenbelt and Adjacent Areas (1965; College Park, Md.: City of College Park, 1970), and Creating Tomorrow Today, A Vision of College Park in the 21st Century: City of College Park Comprehensive Plan (College Park, Md.: City of College Park, 1995).

²⁰⁷ Pete Neale, "College Park is Finally Coming Into Its Own With a New Shopping Center," Old Line 17.6 (Graduation 1951): 3-5 and inside front cover.

project. Political connections were probably responsible for Baker's emergence on the Maryland scene: the firm, based in Beaver County, northwest of Pittsburgh, maintained field offices in several states and countries, but had not previously been a major player in the Washington area. "It was during the [Governor Theodore] McKeldin administration," former Baker employee Isadore Parker recalled in 1998, "and I'm pretty sure that Michael Baker, Jr. [the company's founder] was a strong supporter, probably financial, of McKeldin, and that's why he got the contract outside the state." For the locally established firms, Baker's College Park office was a serious and unwelcome intrusion into their own market.²⁰⁸

"[Baker] was a big, big outsider," former employee Fred Pavay stressed to me in a 1998 conversation.

And that . . . created some ill will. [J.E.] Greiner was like the resident, big engineering company in the state. They did the [Chesapeake] Bay Bridge! . . . Not that that was perfect. Not the point that they were the best. But they were good, thoroughly qualified engineers, and I'm sure they wanted to get into the Interstate business. You know, there's a lot of money involved.²⁰⁹

Parker reaffirmed that the engineering firms which won the big highway contracts in the late 1950s—in this case, Baker; in Virginia's case, a different company discussed in the next section—became the pioneering designers of the Interstate system. At the time, there were few hard-and-fast procedures for developing an Interstate-quality highway,

²⁰⁸ Interview with Isadore Parker, 5 October 1998. Archivists at Michael Baker, Jr.'s current headquarters in Harrisburg, Pa., told me in October 1998 that they could not find any records from the College Park branch office's work on the Capital Beltway; information in this section relies on the interviews cited and on in-house newsletters provided by Fred Pavay.

²⁰⁹ Interview with Fred Pavay, 8 October 1998. All further quotes from Parker and Pavay in this chapter, unless otherwise indicated, are from interviews of 5 and 26 October 1998 (Parker) and 8, 15, and 29 October 1998 (Pavay).

and fewer places to go to learn those procedures. As a result, Baker and its counterparts in other states served as unofficial training grounds for engineers who later moved on to direct Interstate projects elsewhere.

But Greiner, the local powerhouse, had likely expected the contract. "And here comes Baker," Pavay said,

maybe with a little better credentials, and let's be honest, maybe a few good political connections, and even then . . . I thought, man, it's a little marginal ethically. They . . . would buy tickets to some big . . . fundraiser in Baltimore. They knew all the politicians. I used to think, I don't want to know about that. I was doing technical work. But this was a big element of it. And, of course, Baker [himself] could produce, 'cause he must also have had good contacts with the federal government.

Baker was in fact an international player, even if not previously well known in the Washington area. Under the slogan "We Traverse the World," Baker maintained branch offices in Jordan, Cambodia, Ecuador, and Peru.

In College Park, the branch office quickly picked up a number of contracts from the SRC, the National Park Service, and the D.C. Department of Highways. By 1957, according to an in-house newsletter, the office had already completed design or design supervision of several bridges, highways, and surveys in southern and central Maryland, in addition to some bridges and culverts in Washington's Rock Creek Park. Projects in progress at that time included 14 miles of the Baltimore Beltway (I-695), 45 miles of the Northeastern Expressway (I-95), and 38 miles and 68 "Major Structures" of the Washington Circumferential Highway.²¹⁰

Several supervising engineers from company headquarters ran Baker's College Park office, but otherwise the firm hired local talent for its Washington-area projects.

²¹⁰ The Baker Engineer 3.8 (November 1957): 2-3.

Fred Pavay had grown up in northeast D.C., attended Roosevelt High School, and took several engineering classes at the University of Maryland before taking a position as a road inspector and engineering aide for the Montgomery County Department of Public Works, specializing in highway drainage. Isadore Parker had previously worked as a topographic draftsman for the federal government, but had been suspended for reasons resulting from McCarthy-era Communism accusations, like many others in the cooperative new town of Greenbelt. "You're living in Greenbelt," Parker remembered, "and everyone works for the government. McCarthyism was guilt by association. So if you knew the Communists, or if you were familiar with one, then that made you a threat to the country." Pavay similarly recalled that "during the pre-McCarthy era, almost everyone in Greenbelt, virtually, at least those that had some ethnic or Jewish background, were investigated." Indefinitely out of a job and saddled by a groundless federal investigation, Parker responded to advertisements for employment at the Michael Baker Jr. office around 1955, where Pavay joined him within a year.

Parker and Pavay, both suburban residents, were pleased by the project Baker assigned them to, a new highway which would significantly improve their own commutes. "I remember," Parker told me, "when I had to go over from Greenbelt to the Hecht's [department store] in Silver Spring; it would take me about an hour on University Boulevard [Route 193]. That was the only east-west road that we had. And it was just jammed. It was only two lanes!" Commuting from Rockville first to the university and then to Baker's office in College Park, Pavay faced the same traffic and alternated between Route 193 and equally congested two-lane roads.

To relieve this congestion, Parker literally drew up the Capital Beltway. At his previous job, he had become familiar with "very fine drafting . . . which required drawing contour lines of a certain thickness that you had to look in a scope to see that you didn't exceed." Parker's drafting work at Baker, where "all you had to use was a ruling pin," was relatively simple. But for Pavay, who arrived at Baker without the benefit of comparative drafting techniques, the performance of the company's draftsmen was unbelievable. "It was remarkable," he said, speaking of Parker, Jean Miller, and Tom Kelleher, the three draftsmen assigned to the Beltway project.

They didn't use a machine to do the lettering. . . . These three . . . made up standards before I ever went there. Each one had a copy on their desk of a typical bit of lettering. . . . It amazed me. I was not that good. These three people so skillfully matched the style that you had to be an expert—in fact, I couldn't be sure which one did it. They were all doing lettering on construction drawings, on the Beltway, and you couldn't tell them apart. . . . And it was a good thing, because one would start a drawing and another one would finish it a week or two later.

All three draftsmen worked together on the same squad. "Bob Coughlin was the head of that squad, they would call it," Pavay recalled. "That's the way they organized the yards. They were four-man squads with a squad leader, and they just split up the work that way." The Baker office was further divided into a highway section headed by Jack H. Frantz and a bridge section led by Bernt O. Lundbeck; Coughlin's squad was part of the highway division.²¹¹ Each section had a staff of draftsmen and a staff of engineers, the latter of which was larger for the bridge division. All staff members worked at adjacent rows of desks with no separating partitions. Pavay emphasized that while the bridge engineers prepared some of the bridge plans, "Izzy [Parker], Tom Kelleher, and Jean Miller were the three draftsmen that did all the detailed work on the

²¹¹ Ibid., 2.

Beltway. . . . [They] did virtually all the construction drawings for [it]." Fellow staff members included Parker's supervisor John McCormick, bridge engineer Webster Collins, project chief and Bureau of Public Roads veteran Logan L. Ratliff, Hungarian and former dentist Istvan (Steve) Temessy, and former German soldier Friedrich Jacobs.

While Parker sat mostly at his drafting board, Pavay's duties included preparing cross-sections, computing earthwork, and doing preliminary inspections. The most invaluable tool during these processes seems to have been the "typical section," a kind of template for the engineering design of any given portion of the highway. "Anyone can get a sketchy idea of the cross-section of the road by looking at what they call a typical section," Pavay recalled. These came into use, for example, during preliminary inspections, or P.I.s, when a group of five or six, including engineers and representatives of state and local planning authorities, would literally walk the line of the planned highway, tracing surveyors' routes to check for any impediments the original surveyors may have missed.

"What they would take on a preliminary inspection," Pavay said, "would be typical sections, cross-sections of the road, which on the Beltway, for example, would show the entire width of the paved area, [and] the median." These cross-sections accounted for the need to deal with water accumulating on the highway. "What we used," Parker remembered, "was a template which showed two lanes on each side, and then a grassy median on the inside. And you caught the water in the median, so parts of the inner lane sloped toward the median. Parts of the outer lanes sloped towards the edges," likely for the same reason. The Baker engineers intentionally structured their

typical sections for the Beltway with wide enough medians—36 feet, Parker recalled—that 12-foot lanes could later be added on either side to what was originally designed as a four-lane highway.

By the time Pavay moved on to work for the M-NCPPC in the 1960s, engineers were using photogrammetry, a combination of aerial photography and optical equipment, to assist in generating topographic maps. But in the late 1950s, Baker engineers did their work manually: surveyors went out into the field, set a series of benchmarks, and calculated elevations. Neither Pavay nor Parker worked with these surveying parties, but they did use the surveyors' calculations. Pavay explained how he helped prepare preliminary estimates for earthwork: "You first did the profile, then you stretched out the typical section by a scale of, as I recall, ten inch; one inch equals ten feet vertically, one inch equals ten feet horizontally." After measuring various dimensions of the section of land, "by going down the line, in fifty foot increments, you could estimate . . . the total cubic yards of earthwork."

For his storm drainage design, earthwork planning, and other duties, Pavay relied almost entirely on surveyors' work and typical sections, and hardly set foot in the field himself, in what seems a disconnect between the author of the landscape, in a sense, and the product of his work. Parker, too, stayed in the office and used the figures and data he was given. After drawing right-of-way plats, he progressed to designing the highway proper. Here algebra and geometry came into play. Parker explained to me how the design process progressed:

Well, the way the system worked, as I recall it, when the surveyor'd come in with his notes, he translated his notes. In other words, he would start at an elevation of 350.12 or something, and he'd take a sighting, and he would say, like, 15.2, which meant it was 15.2 feet above the level he was sighting in. So

you had to go down the list of it as he'd sight. You'd have to transpose that, you'd have to add them on or take them off from the level that he was sighting them at. And that's called, I think, translating notes. I think that's the term for it.

Then you had to translate that onto a piece of paper. And you had graph paper, and . . . if it was ten feet in elevation, you'd put your point there and a point there. And then you'd connect all your points. Then you had a sheet of paper like that [spreading his hands far apart, horizontally level] with zigzag lines like this showing elevation [making sine-wave motions with one hand]. The designer would come along and would draw a curved line through there . . . keeping within the restraints of how large a curve you can have.

So everything translated into graph paper. And, actually, you didn't need any construction plans. All you needed was a set of graph paper designs. On each—there'd be one line here, and then you'd go another fifty feet, there'd be another line here and one down there. And then you would translate that into your construction drawings. Because you would start out in the middle, and that would be the point that they're going horizontally. And . . . with a template you'd put in the median strip and the pavement. And then, depending on what you'd hit, you'd either go down or you'd go up . . . depending on what that land was.

This translation process, the art of articulating a design in two and then three dimensions, was what made the job worthwhile to Parker. "I thought it was a great learning experience for me," he explained. "It was fascinating how an engineer could work out any kind of a problem, you know, build a bridge, build a freeway. . . . It's all done on paper! Somebody has to translate it into a real structure." For Parker, it really was all done on paper; in all of his drafting work, he only visited the field once, while designing the extension of 16th Street in Silver Spring. More comfortable at the drafting table, he "never was anxious to get out with the surveyors out in the field. I don't know why; it just never interested me." In fact, although he essentially scripted much of the current Beltway's path, he did so half-blindly, as he told me with a grin:

I didn't even know half the roads that we were crossing. When I drive on the Beltway now, I see "Brunett Avenue" [in Silver Spring]. Well, I remember lettering in "Brunett Avenue"! I remember lettering in "Georgia Avenue," stuff like that. I knew where they were, but some of the streets that they

bridged, you know, they were new to me, they were in Montgomery County. For the most part, then, Parker related to the highway he was constructing in abstract rather than experiential terms.

The Beltway, like other roads, was a work of multiple phases of what Parker called "translation." Parker, Pavay, and their colleagues sat in the Baker office and turned surveyors' figures into draft illustrations and detailed construction plans. From there, State Roads Commission engineers, who spent the time in the field which the consulting engineers and draftsmen did not, supervised the "translation" of Baker's plans into an actual highway and conducted a far more experiential relationship with the landscape.²¹² William Shook, who like Pavay and Parker had attended engineering classes at the University of Maryland and had earned a B.S. in civil engineering in 1950, headed the SRC effort through the years of the Beltway's construction.

Unlike the Baker supervisors, Shook was no stranger to Maryland's roads. Immediately after graduating, Shook began work for the SRC as a junior bridge engineer, assisting first on construction of a bridge over the Patuxent River at Benedict, and then on the construction of the Washington National Pike (then new U.S. 240, now I-270) between Rockville and Hyattstown. After additional bridge projects in Frederick and Montgomery Counties and the reconstruction of Veirs Mill Road in Montgomery, Shook in 1956 became Area Engineer and then Assistant District Engineer for Construction in SRC's District 3, which encompassed Montgomery and Prince George's Counties. In 1960, with the Beltway's construction in those counties well underway,

²¹² M-NCPPC staff members also contributed to the design process by supervising right-of-way acquisition along the Beltway's alignment. See interview with Lester F. Wilkinson, Jr., 27 October 1998.

Shook was promoted to District's 3's District Engineer.²¹³ Supervising much of the Beltway construction fieldwork was the district's Area Construction Engineer, Slade Caltrider, who himself had begun work for the SRC in 1948 after one semester of engineering classes at the University of Maryland, and who later became Maryland's State Roads Commissioner.²¹⁴

At a public symposium in 1999, Shook explained how his duties regarding the Beltway's construction picked up where Pavay's and Parker's left off:

My involvement started in the fall of 1956 . . . At that time, the Beltway was under design, and my function in the design area was, at various stages of the design, to review the plans from the district and from the standpoint of construction activities, and to suggest changes that might be necessary also. Another function was to, in the very preliminary stage, when the preliminary plans were completed, which weren't much more than a center line and a few major drainage structures located and that sort of thing, was to walk the alignment of the road. Not only the Beltway, but all the roads that we had designed at that time in [Montgomery County].²¹⁵

Walking along the proposed alignment during these preliminary inspections, Shook held copies of the initial plans, which sketched roughly the land's topography, the proposed center line of the highway, and the projected grades for the highway. The inspection team checked to ensure that all significant physical features of the landscape appeared on the preliminary plans and attempted to pre-empt potential construction problems. "I guess I probably walked about half of the Maryland section of the Beltway before it was built," Shook said. "Interesting. And during that time we had some very

²¹³ William L. Shook to Jeremy L. Korr, 3 March 1999.

²¹⁴ Interview with Slade Caltrider, 28 September 2000.

²¹⁵ William Shook, comments made during "Building the Beltway: The Montgomery Experience," oral history panel moderated by Jeremy Korr, Montgomery County Historical Society's Annual Symposium on Twentieth Century History, Montgomery College—Rockville campus, Rockville, Md., 24 October 1999.

good times on those walks. Odd things would happen."²¹⁶ I cite Shook here at length because these events have not been recorded elsewhere:

I remember walking from University Boulevard to the east, toward New Hampshire Avenue, and when [I] came to an overlook over the Northwest Branch ravine, standing up on a rock up on top of what's now—we cut through, actually, and looking down. The [current] bridge deck itself, if I remember correctly, is about 127 feet above the streambed. And we were up a few feet even higher than that. Quite a spectacular view down into that valley, which is not—we don't think of that in this area, having a close to a 150-foot drop here, looking into a valley or a gully—that deep! And then on the New Hampshire side, it was even higher. . . . [W]e were really huffing and puffing by the time we walked down the hill and then had to climb up the other side . . . a very steep climb out of there.

I recall another occasion . . . in Prince George's County we were walking along and suddenly one of the right-of-way agents who was there disappeared. And I mean, just dropped out of sight. Literally. He walked over an old cistern, I guess it was, that had been dug by a previous home. The house was gone, but you could see the foundation. But they apparently had covered the opening with some boards, which were very rotted and were covered with leaves and weren't visible, and we were walking through what we thought were just leaves, and he stepped on this and disappeared, fell right down and fortunately he wasn't hurt.

Another time . . . it happened to be a right-of-way agent again, decided—we came to a stream in Prince George's County where it was about a foot deep, and none of us had boots. So, I guess the stream was about 15 feet wide. And this one right-of-way agent spied a grapevine and he decided he was going to swing across it. Well, he got about halfway across and the vine pulled free and the tree dropped him right into the stream. Of course we all had wet feet 'cause we had to wade across.

And another time, not so happy, over near Cabin John Bridge, American Legion Bridge now. . . . I use it as an [anecdote] to say, I can tell you the difference between city slickers and country hicks. We heard, we were walking along single file through a little light-wooded area, a lot of brush around. And somebody kicked up a yellowjackets' nest, had walked over the top of one. Well, anyway, the cry of "Bees!" went out. Of course the city slickers froze in their tracks. The country hicks immediately ran into the brush. I was raised in the country and I learned that, at an early young age, that if you kicked up a yellowjackets' nest the best defense was to run through brush, trees, anything

²¹⁶ This and all further quotes attributed to Shook, unless otherwise stated, are from interview with William L. Shook, 1 February 1999.

you could find, to get 'em away from you. So . . . we had to take one of those city slickers to the hospital, he got stung about a dozen times, before somebody got him to move and get out of the way. . . . But we had to take him to Suburban Hospital 'cause he started having a little bit of a breathing problem.

Shook's recollections of the valley, streams, woods, and bees offer a rare glimpse into the physical appearance of the Beltway's landscape in Prince George's and Montgomery Counties immediately before the highway was built. After he and the preliminary inspection teams completed their tours, filed their reports, and suggested changes to the initial rough plans, construction crews working for the state began in 195[5] the task of "translating" the Beltway into three dimensions.

In general, both the SRC and the Baker engineers followed the basic alignment which the M-NCPPC had proposed in its 1952 master plan before Maryland and Virginia had even agreed to go ahead with the project. SRC and Baker engineers made some changes to that original alignment because of issues related to right-of-way acquisition and to other physical impediments. W. Lee Mertz, a BPR official who accompanied Shook's team walking the line, remembered in a 1988 oral history interview how the party translated the rough two-dimensional line into a concrete alignment:

Mertz: I had the pleasure of—I will say to give vent to my ego—of laying out the Beltway. I walked every foot of that with Garland Maple and the State people, nailing down the location of the Beltway. That made me feel like I was in the presence of the great there. Flying with the Eagles.

John Greenwood: What were the problems associated with that?

Mertz: As far as we saw it, any time we ran into anything that looked like development, we moved further out.

Greenwood: So you had successive locations for where you were placing your road or your location?

Mertz: I am not aware of it being pinned to a specific mapped location—we just went out there the same way we used to out in the Forests and Parks. We would just strike out through the timber and—

Greenwood: Find the best road?

Mertz: Yes. And if we ran into any development, we would go further out.

Greenwood: And evened it all out in your detailed location?

Mertz: Yes.²¹⁷

Even before Mertz and Shook went into the field, the M-NCPPC itself had already changed its oldest routing plan back in 1952 for apparently political reasons. In November 1952, about 300 residents of Berwyn, a neighborhood in central College Park, gathered to protest the M-NCPPC's plan to route the northeast arc of the circumferential through their community, about a mile north of the University of Maryland (Fig. 6). State delegate J. Frank Lillard, Jr. agreed with the group that the highway section in question suspiciously dipped down to the south—straight through the Berwyn neighborhood—rather than following what he called a more logical path to the north. At the meeting, fingers pointed directly at university president Harry "Curley" Byrd.²¹⁸

M-NCPPC planners were concurrently developing a bypass for old Route 193 to the north of the university, which at the time the road traversed. They acknowledged that their ideal plan would link the bypass to the new beltway just north of the

²¹⁷ AASHTO [American Association of State Highway and Transportation Officials] Interstate Highway Research Project: Interview with Mr. W. Lee Mertz, conducted by Dr. John Greenwood for Public Works Historical Society, March 5 and 12, 1988, 39. Richard F. Weingroff collection, Federal Highway Administration.

²¹⁸ "Maryland U. Pressure On Freeway Route Hinted by Legislator," Evening Star, 15 November 1952: A-2.

university. Because this design would clearly create improved access to the university—at the expense of Berwyn—those residents considered it likely that Byrd, with extensive regional political connections, was involved with the plan to swing the beltway down to the campus. Using terms commonly known to refer to Byrd ("kingmaker") and the university ("college on a hill") Lillard said at the protest meeting that "I intend to investigate whether there has been any pressure from the 'kingmaker on the hill' to bring the freeway closer to the university. And you can draw your own conclusions as to who I mean."²¹⁹ Within a week of the protest, the M-NCPPC disclosed alternate plans under consideration which would send the highway a mile north of Berwyn through federally-owned property used by the Beltsville Agricultural Research Center. Later plans followed that northerly routing, and the Berwyn protest became insignificant.²²⁰

Because an alternate route came to light so quickly, the university's Byrd never had to address accusations of intervention in the Beltway's design process. Did he, in fact, pressure the M-NCPPC to swing the original plan's routing southward to the university? Byrd's presidential papers in the university's archives are missing all correspondence from the several months surrounding the Berwyn episode. However, Byrd was certainly in a position to push his influence if he chose, with good relationships with top officials of both the M-NCPPC and the SRC. His list of suggested invitees for a luncheon at a Maryland football game in October 1953 included three administrators and the chief engineer of the SRC, eight administrators and two planning engineers for the M-NCPPC, and notables with the NCPC, National Capital Regional

²¹⁹ Ibid.

²²⁰ "New Route Suggested North of Berwyn for Proposed Freeway," Evening Star, 17 November 1952: A-2.

Planning Council, the Montgomery County council, and the Prince George's County Commissioners.²²¹

Furthermore, a letter to Byrd written ten months before the Berwyn protest indicates a working relationship between Byrd and M-NCPPC and SRC officials, and suggests plans already at that time to link the beltway and the Route 193 bypass adjacent to the university. In a letter focusing otherwise on road improvements near the campus, M-NCPPC Director of Planning Fred W. Tuemmler wrote:

I certainly hope that you can succeed in getting the State Roads Commission to commit itself to improving some of the highways in the University area. The widening of University Lane [Route 193] into a dual highway and the building of what we have called the "Proposed Maryland Parkway," which goes past the stadium, are particularly important, and, in my opinion, should be in the first stage of construction.²²²

Since the earliest proposals for the Maryland portion of the Beltway often described it as an "Inter-county belt parkway," Tuemmler may well have been referring to it with the term "Proposed Maryland Parkway." If so, his letter provides the strongest existing evidence for some sort of collusion, however informal, between Byrd and the two agencies over the initial routing of the Beltway.

While College Park residents ended up satisfied, their neighbors to the immediate east in Greenbelt were not. Already their town had been sliced by the Baltimore-Washington Parkway in 1948. In 1954, Greenbelt residents learned that the

²²¹ "Memorandum—September 16, 1953," in "Maryland-National Park and Planning Commission" folder, Box 119, Presidents' Files, Archives and Manuscripts collection, Maryland Room, University of Maryland Libraries.

²²² Fred W. Tuemmler to H.C. Byrd, 14 January 1952, in "Maryland-National Capital Park and Planning Commission (Fred W. Tuemmler) 1952" folder, Box 117, President's Files, Archives and manuscripts collection, Maryland Room, University of Maryland Libraries.

forthcoming "Inter-County Belt Freeway" was plotted to run adjacent to the community's central lake and straight through a proposed housing area. Such a routing would have destroyed or damaged local recreation areas, the city's sewage disposal system, a natural spring, and the overall development of Greenbelt as a carefully planned new town. The Greenbelt City Council asked Governor Theodore McKeldin to force a change in the SRC's plans for these reasons; the Commission did alter its route through Greenbelt—not in response to the community's concerns, but because a cemetery blocked the original path.²²³

Outside of Greenbelt, through most of the highway's alignment in Prince George's County, sparse development made right-of-way acquisition fairly simple. In Montgomery County, already existing residential and commercial developments meant that the state needed to buy the houses and business in the proposed path. In Silver Spring, the SRC purchased a ten-store shopping center and several houses off Forest Glen Road, as well as four holes of the Sligo Golf Course near the Route 193 interchange. Between 1955 and 1958, the state paid about \$875,000 for 58 lots in Silver Spring along the highway's alignment on Bristol Avenue, Brunett Avenue, Colesville Road, Dallas Avenue, Forest Glen Road, Grayson Avenue, Hastings Drive, Lorain Drive, Merwood Lane, Stirling Road, and Sutherland Road. Many of these neighborhood roads were altered to come to dead-ends at either side of the Beltway. Maryland also purchased the Golden State Dairy at the site of the New Hampshire Avenue (Route 650) interchange. However, the state did not offer to purchase lots near

²²³ Cathy Dee Knepper, "The Gospel According to Greenbelt: Community Life in Greenbelt, Maryland, 1935-1990," Ph.D. dissertation, University of Maryland at College Park, 1993, 152-153.

but not within the Beltway's alignment; the resulting effects on the remaining residents is discussed in the next chapter.²²⁴

Actual construction began in February 1955 with a bridge over Cedar Lane just inside Rock Creek Park, east of Wisconsin Avenue.²²⁵ This was not the only time that construction crews built bridges—and nothing else—in the middle of woods, anticipating the highways but befuddling nearby residents. William Shook recalled that

one of the interesting things we did on the Beltway—we also did it on 70-S [now I-270], and in a couple instances on other roads—we'd go out in the middle of the woods and cut trees down. Either dig a hole and build a bridge across it. And a few occasions in other cases we'd build two mounds of earth and build a bridge between them. That caused some interesting articles in local newspapers at the time. . . . [W]e were explaining . . . why would you put two mounds of earth up and put a bridge between them! Well, of course, the idea was get these bridges built ahead of time. And it was always a help to have the bridges up ahead of time.²²⁶

The first construction bids for the highway itself were opened in April 1956 for the 1.5-mile stretch between Wisconsin and Connecticut Avenues in Montgomery County. That section, after overcoming controversy outlined in Chapter 5, opened to drivers in October 1957 after just over a year of construction at a cost of nearly \$1 million. Governor McKeldin's wife cut a dedication ribbon just east of Wisconsin Avenue on October 25, while McKeldin and Bureau of Public Roads Commissioner C.D. Curtiss cut a separate ribbon fifteen miles to the east at the Kenilworth Avenue interchange, at the time the largest interchange in the state. In a speech, McKeldin

²²⁴ "Council Weighs Freeway Path," Evening Star, 11 May 1955: A-27; "Construction Initiated on 4 Corners-Langley Leg of University Blvd.," Evening Star, 13 March 1958: A-1.

²²⁵ George Beveridge, "Inter-County Road Belt Work to Start Despite Park Dispute," Evening Star, 20 February 1955: A-1.

²²⁶ Interview with William Shook.

called the Beltway "a conspicuous symbol" of Maryland's effort to deal with the "ever-tightening tangle of traffic around our big cities."²²⁷

October 25, 1957, was a day of recognition for partial accomplishments: Kenilworth Avenue had a 3.5-mile interchange structure but no highway attached to it, while Wisconsin Avenue had a 1.5-mile highway stretching away from Pooks Hill but no completed interchange. Construction crews from the Wright Contracting Co. worked on the Wisconsin Avenue interchange from February 1958 through November 1959 under the supervision of engineers from the Michael Baker, Jr. office. The Pooks Hill site was finally completed two years later, at a total cost of \$2.3 million, as a massive interchange serving the Beltway, the Washington National Pike (I-70S), and Wisconsin Avenue, comprising 4.2 miles of paved lanes and approaches and six bridges. Governor Millard Tawes presided at a second ribbon-cutting ceremony on November 30, 1959.²²⁸

Reuben D. Cook, a supervising engineer for Baker, told the media that work on the Pooks Hill interchange had proceeded smoothly.²²⁹ This was not true. The engineers directing construction at one point erred while reading the surveyors' notes, and began to build an abutment in the opposite direction from the intended design. Fred Pavay remembered that his squad's chief, draftsman Jean Miller's husband,

took a wrong dimension from the plan, and staked it out in the wrong location. . . . I remember a lot of talk about who was going to pay for it. It was not a completed bridge, but the abutment was in the wrong place by—it may not have

²²⁷ "Bids Asked for First Lap of Inter-County Beltway," Evening Star, 19 April 1956: A-30; "First Section Dedicated of Circumference Road," Evening Star, 25 October 1957: A-25.

²²⁸ G.O. Herndon, "Pooks Hill Interchange to Open For Northbound Traffic Monday," Evening Star, 6 November 1959: B-1.

²²⁹ Ibid.

been more than six feet or something, but you know, for a bridge . . . that's a major mistake. . . . But he didn't lose his job . . . he was a good man, and apparently it was just one of those mistakes that can happen. And luckily they caught it before they put a bridge on it.

William Shook, who played a central role in this episode, offers an example of what type of negotiations went on behind the scenes during the Beltway's construction:

As I recall, the abutment was built 12 feet behind where it should have been. Which meant that the span of steel would have been too short, cause the steel was being fabricated already, to meet the planned location. When I became aware of it was when the consultant, Michael Baker, was also doing, of course, the inspection and the engineering on the project. . . . Michael Baker had sent in a request for an extra work order for, I don't remember anymore the amount of money, but quite a few thousand dollars. More than ten thousand, I know. To tear out this abutment that was improperly placed. And I was sent over by the district engineer to investigate and find out what was going on. And I found out, of course, the abutment had been laid out in the wrong place, contractor had driven the piles and poured the concrete cap on them. The only thing remaining to be poured was what's called a backwall. There's a thin retaining wall-type affair that goes up behind the steel at the roadway level and retains the earth fill behind it. There was steel sticking up for that, reinforcement steel.

So I took one look at it and I could not [envision] spending the money to tear it out. It was far enough back that we could simply extend the fill to where it belonged. Drive new piles in front of it and build a new abutment. And just cover the old one up. So that's what I had recommended. I recall, there was an adverse reaction from the Michael Baker people. In fact, I received a call on our two-way radio. We'd just gotten them, and the chief engineer wanted to see me immediately in his office. Not a phone call, but in his office. So, I recall making a trip from Montgomery County to the Baltimore office. In those days, before I-95 and the Beltway and so forth, that was over an hour's drive.

And he said, what's going on? What's the problem? And I explained it to him. . . . He said, well, you're right, we're not going to tear it up. And he indicated he had gotten a phone call from higher up. I don't know who it came from, but normally, if it had come from the chairman of the State Roads Commission, he would have said that, I think. So I suspect it may have even come from the governor's office. There was a big disagreement going over that. So I couldn't see paying a contractor to take that abutment out. It wasn't necessary. On top of that, Michael Baker would have then received their percentage fee for it. They were being paid on the basis of construction costs. In fact, I recommended that Michael Baker should pay for the cost of building a second abutment. I don't know whether they ever did or not.

Construction crews put in the correct abutment, and the interchange as designed opened in November 1959. But that design itself was fatally flawed in the eyes of the drivers who would eventually use it; I will return later to the reactions over the Pooks Hill interchange and the responses of highway officials.²³⁰

Construction of the northern section between Georgia Avenue and Route 193 proceeded in 1960, and a southern portion near the Woodrow Wilson Bridge was built in 1961.²³¹ On December 28, 1961, opening ceremonies for the Wilson Bridge were cancelled in the face of 33-degree weather and a howling wind, although a group of dignitaries and the U.S. Marine Band had gathered bravely on chairs in the middle of the bridge before the proceedings were called off.²³²

Halfway around the Beltway, the opening of the other Potomac River crossing was also delayed, a year later, by extremely cold weather. The Cabin John Bridge represented another compromise in the M-NCPPC's and SRC's original alignment, resulting from its passage over Plimmers Island, a 12-acre scientific retreat in the Potomac River that was owned by the Department of the Interior but operated since 1901 by the Washington Biologists' Field Club. Members of the club successfully

²³⁰ Maryland officials were not alone in responding to that type of error. A former Northern Virginia resident recalls that she

was dating a highway inspector at the time they were building the section in Alexandria, and . . . the surveyors didn't stake the thing quite right and when the 2 sections met somewhere around Van Dorn/Telegraph the lanes were nearly three feet off the mark for "connecting"—you couldn't have driven the golden spike on that one because the tracks just didn't meet. (Beltway Survey #596)

²³¹ Gilbert Gimble, "Year's Speedup In Beltway Set By Maryland," Evening Star, 2 November 1960: A-1.

²³² Feaver, "Washington's Main Drag"; interview with Slade Caltrider.

convinced the SRC to shift the Beltway's path 200 yards upstream, where it still crossed the island but was expected to have less environmental impact.²³³ Because Maryland owned the Potomac River, it paid for most of the \$2,800,000 bridge cost; Virginia was responsible only for the 20 percent of the bridge which ran over its land.

The Cabin John Bridge, and the surrounding highway from Fairfax County's Route 7 to Montgomery County's River Road, were scheduled to open in early December 1962, but "wind whistling down the river [made] it too cold for the workmen" and delayed the laying of some pavement, SRC district engineer Shook explained at the time. The bridge, built by two Indiana contractors, opened "with absolutely no fanfare" on December 31 in 13-degree weather, with strong winds blowing across the river, too cold once again for official ceremonies.²³⁴

On November 15, 1963, the three-mile segment between River Road and Old Georgetown Road also opened without ceremony, in part because of an anticipated grander celebration the following year for the Beltway's completion, and also due to the previous day's formal opening by President John F. Kennedy of the Northeastern Expressway northeast of Baltimore (I-95). A few weeks later, the mile-long section between Old Georgetown Road and Wisconsin Avenue opened.²³⁵ With links open between the Beltway's northwest arc and I-70S, drivers could now speed between

²³³ Anne H. Christmas, "New Span to Unmask Island Jungle," Evening Star, 5 July 1960: B-3; John C. Schmidt, "65-Mile Capital Beltway Opens," Evening Star, 16 August 1964: D1.

²³⁴ Ibid.; "Beltway Section, Span to Open in December," Evening Star, 19 August 1962: E-2; "Cabin John Bridge Opening Delayed," Evening Star, 17 December 1962: B-1; "Cabin John Span Opens On Cold, Quiet Note," Evening Star, 31 December 1962: B-1.

²³⁵ Anne Christmas, "4 Mile Beltway Link Is Opened Quietly," Evening Star, 15 November 1963: B-1.

Bethesda, Cabin John, northern Virginia, and points northwest. After the eight-mile segment in Prince George's County between Pennsylvania Avenue (MD 4) and Indian Head Highway (MD 210) opened in July 1964, all that remained for the Capital Beltway to become a full circumferential was the connection between Indian Head Highway and Alexandria and the reconstruction of the very first section to have opened, the 1.5 miles between Wisconsin and Connecticut Avenues, for reasons described in the next chapter.²³⁶ The full Beltway's opening in August 1964, though, was only possible because of Virginia's efforts to catch up to Maryland's progress in building its own 22-mile portion, after having delayed following the 1954 multi-jurisdictional agreement until funding could be secured. Both states had to coordinate on the placement of the two Potomac River crossings, but otherwise the Beltway in Maryland and the Beltway in Virginia were planned in essentially autonomous processes.

The Capitol Ring in Virginia

In Maryland, the engineering firm Michael Baker, Jr. assisted the State Roads Commission in planning the state's Interstate highways. On its side of the Potomac, the Virginia Department of Highways (VDH) hired Howard, Needles, Tammen, and Bergendoff, now called HNTB, a New York-based firm which had been active in designing several of the postwar toll expressways, including the Maine Turnpike (1947)

²³⁶ "New Eight-Mile Section of Beltway To Open in Prince Georges July 17," Evening Star, 5 July 1964: B-3.

and New Jersey Turnpike (1952).²³⁷ Engineers from HNTB attended VDH's initial meeting outlining the state's vision for its roughly one thousand miles of Interstate highways; Virginia then selected the firm to define, design, and supervise the construction of most of those highways. HNTB's first commission under this assignment was to plan the alignment of the entire 22 miles of the Capital Beltway in Virginia and to design the Beltway from the Woodrow Wilson Bridge to between Little River Turnpike and U.S. 50 (VDH designed the portion from there to the Cabin John Bridge). Separately, HNTB also contracted directly with the Bureau of Public Roads to plan and design the Wilson Bridge itself.²³⁸

HNTB in Virginia and the M-NCPPC in Maryland both charted almost completely new alignment for the Beltway's path, because so few inter-suburban roads existed in the mid-1950s which could have been upgraded as part of the route. Robert Mannell, an HNTB junior draftsman during the Beltway's construction, recalled that

it appeared that most of the better geophysical routes were already taken up by development, and consequently the Beltway had to traverse a path along areas that were not amenable to development. The terrain was rough. You had the stream bed locations, along the banks of stream beds coming up Hunting Creek and that type of thing.²³⁹

HNTB's Interstate highway plan for Virginia, published in 1956 before construction for the Beltway began, confirms that the so-called Washington Circumferential Route was "an entirely new facility, which neither supplements nor replaces any existing routes. . .

²³⁷ The former HNTB engineers I spoke with referred to the company interchangeably as "Howard, Needles" and "HNTB." I will use the term HNTB.

²³⁸ Interviews with *Sidney Miller, 6 and 23 February 2001. All further quotes attributed to Miller in this chapter are from these two interviews.

²³⁹ Interview with Robert Mannell, 9 January 2001.

. It is notable that this line follows virtually the only open corridor through the area. To shift from this alignment would either involve considerable property damage to heavily developed areas or require the location of this route much further from Arlington and the Washington area.²⁴⁰

*Sidney Miller, an HNTB engineer who later helped design other Northern Virginia highways including reconstruction of the Shirley, remembered how the specific alignment was determined:

[A] line was scratched. And I don't remember exactly who, but I know that certainly our firm, working with VDOT, determined—and in those days we did it in several ways. One way was aerially. We would have a photograph of the area, an aerial photograph. And then you would plot as you looked where you thought it was reasonable, and then you would field-check it.

In regard to the field-checking, at that time as a young engineer, specializing at the time in bridges, my function was to take a look at where the bridge crossings would be, and what I anticipated to be the difficulty. . . . What I did in estimating the bridges, every time I came to where there was an existing crossing . . . I was jotting down notes and things of what I envisioned the bridges would be, so that when I got back to the office we could be doing some preliminary estimates as to what would be involved in the costing, both in the design and costing of the Beltway.

Like William Shook in Maryland, Miller walked along the future alignment of the Beltway in Virginia. His description of the rural character of the landscape suggests that Mannell's reference to development limiting the potential alignments may have had the southern, Alexandria portion of the Beltway in mind. There, existing houses and businesses did make the Beltway's siting slightly tricky, though business leaders were very much in favor of the highway; the Chamber of Commerce lobbied the state to build extra interchanges beyond the single one (at U.S. 1) in the original plan

²⁴⁰ Commonwealth of Virginia, Department of Highways, Interstate Highway System (New York: Howard, Needles, Tammen & Bergendoff, 1956), n.p.

specifically to better serve the city's commercial district.²⁴¹ But Fairfax County, to the west, was still countryside:

[O]n my own initiative . . . I walked the line, so to speak. And as I mentioned, it was kind of rural. There were scattered homes, here and there, and many of the homes had outdoor plumbing rather than indoor plumbing, and kids walking barefoot. . . . If you can believe what this area looks like now, and what it looked like then, how can I put it? One never would have estimated such growth could develop. But all I can say is that it was very rural. I was surprised, if not shocked, that in many of the cases I was walking through virgin area, that there were houses where people had outhouses . . . quite rural. And obviously very undeveloped. . . . So all I can say is that it was an enlightening walk, and it wasn't an easy walk because I had to sort of detour a little bit around things in order to follow a line that was just scribbled, more or less, on an overall planning map.

It is important to note that while the alignment Miller describes was rural land, it was not vacant land. The alignment did not plow through developed neighborhoods, but it did cut across "scattered homes" with outhouses. And because the routing was not random—as Miller explains above, engineers plotted where they thought it would be "reasonable" while looking at an aerial photograph—the HNTB engineers must have considered this rural land "reasonable" in spite of the people already using it. The alignment did have to go somewhere, and Miller's description suggests that HNTB's design impacted relatively few people. But that routing literally uprooted pieces of history from the ground, as C.C. Swink of McLean explained in a 1972 oral history, speaking about his family's farm and mill:

Stephen Matthews [interviewer]: Well, I have seen a lot of Civil War maps, they have this fort built up on your hill. Was there much to that?

Swink: That I can remember that it was just this trench running from out there to the [Georgetown] Pike and then on around the side here and wound up right in back of the house.

²⁴¹ "Chamber Asks Three Links With New Road," Fairfax County Journal-Standard, 26 April 1957: 8.

Matthews: Yeh. And it must have been a great defense to be able to look all the way out there, and it's quite a protection. But did you pick up any kind of artifacts or anything like that?

Swink: We found some bullets when we plowed the ground. And then when they went through here and cut that Beltway through, oh Christ, they were running in all directions, the bullets and pieces of glass, buttons, Army buttons.

Matthews: You found that, some of that stuff?

Swink: Well, I didn't. I didn't go out there to look for it.

Matthews: But other people were?

Swink: Yeh, we found—somebody did here, was a shell, two in fact. That was one of them had never exploded.

.....

Matthews: But when they built the Beltway, did they completely cover up anything that would be left there from before?

Swink: Yeh.

Matthews: With fill dirt and everything?

Swink: They dug it all to down there where that Beltway went and, you know, and they go up that grade there to get to the old Pike.

Matthews: Yeh. And it's all been just about taken out.

Swink: Um-huh.²⁴²

While much of Northern Virginia was relatively undeveloped at the time of the Beltway's design, highway planners recognized that in the time it would take to build the highway, Virginia was likely to experience at least some of the same kind of suburban growth as Maryland. Virginia Highway Commissioner Douglas Fugate

²⁴² "An Interview with Mr. C.C. Swink of 1001 Balls Hill Road, McLean, Virginia," interviewed by Stephen L. Matthews, Northern Virginia Oral History Project Collection, Special Collections & Archives, George Mason University Libraries, 20-21.

explained in 1964 that "it is important that the Beltway was built before further development could take place in the county, so that now future development can be made in relation to the traffic artery."²⁴³ Fugate omits the detail that in order to ensure that development would not impede the Beltway's construction, planning officials resorted to what was in effect blackmail. Anne Wilkins, who served on a Fairfax County planning commission, explains that

the planning commission adopted a transportation plan and it was used as a guide all these years. One of the things that we got as a result of that was the location of the beltway. The beltway was on Fairfax County's master plan, which had not been adopted by the [Fairfax County] Board [of Supervisors]. But when various subdivisions went in, they were not required, but coaxed, shall we say, some of the builders would say blackjacked into dedicating or at least reserving the right-of-way for the beltway so that when the state got ready to build the beltway the right-of-way was there most of the way. Where it had been reserved they had to buy, but many places it was already dedicated. This was what we were trying to do, but politically the plan could not be adopted officially.²⁴⁴

Fairfax County's strategy worked; while Maryland residents challenged segments planned through certain areas in their state, as described in Chapter 5, in Virginia enough relatively undeveloped land was kept that way to allow for construction without protest.

Actual construction in Virginia on what the state first called Interstate Route 413 began some three years after Maryland's, in April 1958, between Little River Turnpike and Backlick Road in Fairfax County.²⁴⁵ Engineers proceeded with few hitches other

²⁴³ Douglas B. Fugate, "22 Miles of Beltway Open Today," Annandale Free Press, 2 April 1964: 1.

²⁴⁴ "Interview with Mrs. Anne Wilkins," 17. See also Fairfax County Planning Division, Master Plan Section, Freeway System, Part I: Highway Master Plan (Fairfax County, Va.: Fairfax Co., [1960?]), 14.

²⁴⁵ F.L. Burroughs, "The Capital Beltway," Virginia Highway Bulletin, January 1961: 6.

than a segment between Route 7 and Arlington Boulevard, delayed until 1963 or 1964 because of difficulties in letting a contract for the construction of a bridge overpass for the Washington & Old Dominion Railroad line, and challenges created by marsh conditions in Alexandria, detailed in Chapter 7 in a discussion of environmental considerations. The stretch from Shirley Highway to U.S. 50 was the first to open to the public, in 1961.²⁴⁶

On April 2, 1964, opening ceremonies to mark the completion of the full 22-mile portion and of the first Interstate project statewide were held a half-mile west of the U.S. 1 interchange in Alexandria. On yet another cold, wet, and windy day—a hallmark of Beltway openings—a group of about 200 listened to speeches by highway commissioner Fugate, Bureau of Public Roads Chief Rex Whitton, and Governor Albertis Harrison, and music by the 75th Army Band of Fort Belvoir.²⁴⁷ Full access to Maryland's suburbs still awaited the completion of Prince George's and Montgomery County segments in August. Still, with both the Wilson and Cabin John Bridges open with the entire Virginia portion up and running in-between, drivers could now cross from Maryland's six-lane Beltway . . . into Virginia's mostly four-lane version.

Virginia engineers were well aware of this mismatch. Jack Hodge, who worked for VDH and later for VDOT, pointed out that

Virginia was ahead, initially, of Maryland, and had approval to design and build

²⁴⁶ "Beltway Section, Span to Open in December"; Van Dyne, "Getting There," 202. See also "Local," *Fairfax Herald*, 27 November 1959: 1; and "Bids Let on Highway Projects," *Fairfax City Times*, 21 February 1963: 1.

²⁴⁷ "Governor Harrison to Open Beltway," *Fairfax City Times*, 27 March 1964: 2; Phillip Sawicki, "Final Virginia Stretch of Beltway is Opened," *Northern Virginia Sun*, 3 April 1964: 1; "Beltway Opening Ceremonies," *Fairfax Herald*, 10 April 1964: 1.

four lanes. But in that interim period of time [while Virginia waited for funding to be approved], Maryland came through and built six lanes. Now how would you like to be in charge of the Capital Beltway on the Virginia side, looking at six lanes coming to your four? . . . Well, it was discouraging, but the Beltway was open and did function.²⁴⁸

Hodge and fellow state engineers had good reason to be frustrated. Before it began building its portion of the Beltway, the VDH had in fact recognized the same thing that Maryland's SRC did: imminent suburban growth would be better accommodated by a six- or eight-lane highway. Maryland, which ran its portion through some already heavily developed areas, managed to change its plans in time. But federal officials would not allow Virginia to do the same. In a 1988 oral history interview, former BPR official F. Lee Mertz accepted responsibility for the decision to limit Virginia to four lanes:

Mertz: I really hate to admit to this, because I was the one that furnished all of the traffic estimates for the Beltway, but we just could not find any prospect of all the development that took place outside the Beltway. We just couldn't foresee it. I was responsible for the original two-lanes and two-lanes on the Beltway in Virginia. And believe it or not, the GAO [General Accounting Office] did a study on us, and criticized us for being too conservative, that we should have gone four and four. We just kind of grinned and said, "Okay, fine." But they were proven right.

John Greenwood: But how do you project growth? Even your projections didn't show it?

Mertz: Didn't show it.

.....

Greenwood: Well, what [Virginia Highway Commissioner Douglas Fugate] said was when they came to the bridges, everybody picked on them because they said, "You fools, the guys in Maryland have three lanes coming in. You have two. What the hell is wrong with you?" He said they [VDH employees] really resented it. As the traffic got worse and worse, he said, "We originally had planned for four [lanes in each

²⁴⁸ Interview with Jack Hodge, 9 January 2001.

direction]." He said, "Then we would have looked great, but we couldn't have them."

Mertz: Yes, he is absolutely right. But that is a good example of the dynamic tension that went on between the Highway Departments and BPR over the cost estimate.²⁴⁹

Mertz's decision to restrict Virginia's Beltway to four lanes made sense at the time, and was consistent with the BPR's policy of building Interstates to meet existing needs (which the Bureau later revised with an eye toward meeting future needs as well).²⁵⁰ Douglas B. Feaver, who later covered local transportation for the Washington Post, recalled that even four lanes seemed "crazy" to both state and federal officials through an extremely rural area.²⁵¹ Former HNTB and VDH engineer Robert Mannell, who had to deal with the criticism of the mismatched lanes, felt that

It's not a disappointment. Someone looks at the numbers and says, how can we spend public money on putting these lanes in when the traffic doesn't justify it? The feds at that time had a perfectly legitimate argument for not putting the lanes in. Virginia saw that the potential for development would be greater than what the traffic forecast was being proposed, and felt it would be the best money to be spent at this time. But that's just difference of opinion. That occurs every day and goes on today.²⁵²

The "difference of opinion" led directly to Virginia's opening a four-lane (for a short portion, six-lane) Beltway in 1964, which was quickly overwhelmed by the increased traffic predicted by the state. It would take decades before Virginia could build enough additional lanes to catch up to where it had hoped to be from the beginning; discussion

²⁴⁹ AASHTO Interstate Highway Research Project, 40-41.

²⁵⁰ Schmidt, "65-Mile Capital Beltway."

²⁵¹ Interview with Douglas B. Feaver, 26 January 2001.

²⁵² Interview with Robert Mannell.

of its efforts to improve the Beltway in this respect as well as others follow in Chapter 7.

Why did Maryland have the advantage? Unlike Virginia, it already had a beltway, which opened just in time to give Maryland engineers a sense of what kind of traffic they could realistically expect on the Capital Beltway. In the mid-1950s, Maryland had only enough funding to build one beltway at a time; an SRC spokesman explained in 1964 that the "Baltimore Beltway had been in planning stages for a much longer period, and because its planning was more advanced, it was built first."²⁵³ Former M-NCPPC engineer Lester Wilkinson explained that the lessons from the new \$68 million Baltimore Beltway were applied as the Capital Beltway construction was literally in progress:

[O]riginally the Beltway was designed as four lanes. And then, because of the experience the state had in Baltimore, the Beltway there, that the traffic volumes, they had reached what they had expected to reach in ten years in about three; they decided in Washington to go ahead and build three lanes [in each direction]. By the time they reached that decision, part of it had already been built. . . . As a matter of fact, you can go over some of the bridges . . . around the county line. You can see a big joint going parallel to the highway, with the bridges. And that's where they had first built the bridges to be two lanes and then had to suddenly make the bridge four lanes. But what they did, they decided to build three lanes and make it expandable to four. In each direction. And that was really occurring almost while it was being built.²⁵⁴

Patrick Zilliacus, who grew up in Silver Spring, recalls that the section between Georgia Avenue and Route 193 opened in 1962 as "two lanes in each direction with a HUGE green median. Part of the median was almost immediately taken away as this segment

²⁵³ Qtd. in John C. Schmidt, "65-Mile Capital Beltway Opens," Baltimore Sun, 16 August 1964: D1.

²⁵⁴ Interview with Lester F. Wilkinson, Jr.; Schmidt, "65-Mile Capital Beltway." Wilkinson's account is corroborated by former Michael Baker, Jr. draftsman Isadore Parker; see interviews with Isadore Parker.

was widened to three lanes in each direction prior to 1964."²⁵⁵ Clearly the BPR did not find Maryland's decision to build as it did as objectionable as it did Virginia's request for the same expansion. As a result, as the Beltway's full completion neared in August 1964, drivers noticed and questioned the obvious physical disconnect between the states even as they looked forward to the speedy drives the road would allow. But even before the Beltway opened to traffic, local residents had found a role for it in their lives.

Before the Opening: Playground and Racetrack

From 1955 to 1964, the Beltway belonged not just to the construction crews laying it out or the drivers taking advantage of each segment as it opened. It also became a site of social activity for children and teenagers, as well as a meeting place to bring them together from around the region. Highway officials neither planned nor condoned this use of the partially completed roadway, but they do not appear to have gone to great lengths either in preventing it. The cultural landscape study model suggests, in the fifth operation, that landscapes frequently carry multiple and contested meanings; during this period, the Beltway was perceived and used in drastically different ways by the people building it and the ones appropriating it for their own purposes. Before it became a commuter highway and a bypass expressway, as intended by its planners, the Beltway was, in essence, a playground.

That is the term used by respondents to my survey from both states who joined their friends and family members in the fun to be had on the construction site. One man,

²⁵⁵ Beltway Survey #128.

who moved to Silver Spring at age 11, remembers that "[t]he Beltway right-of-way between Georgia Ave. and Sligo Creek was our 'playground.' We were approaching driving age when the Beltway opened so our new 'playground' became a highway for our new 'toys,' our cars."²⁵⁶ A woman who grew up halfway around the Beltway in Annandale, Va., recalls that "[t]he area was our playground. We spent many afternoons in the cisterns beneath."²⁵⁷ A former Silver Spring resident is more effusive: "Great fun . . . road [sic] my bike and home made go kart on the highway . . . met kids from near by neighborhoods that did not go to my school . . . raced, played . . . what a great playground [ellipses in original]."²⁵⁸ These remarks suggest that before the Beltway connected adult drivers from around the region in 1964, it brought together children or teenagers from different social networks, serving as a unification device in a different way than intended.

These social gatherings were not limited to children. One former area resident recalls seeing "greasers" taking part in drag races on unopened parts of the highway.²⁵⁹ These races occurred all around the loop and often on regular schedules. A former Langley Park (Silver Spring) resident remembers "going to the weekend drag races on the beltsville section," while Bonnie Douglas, who grew up in Alexandria, writes that "[b]ack when the Beltway had not opened yet . . . [s]ome of us Alexandria teenager[s] (back in the 60s) used to sneak on to the new beltway and have drag races – until of

²⁵⁶ Beltway Survey #259.

²⁵⁷ Beltway Survey #257.

²⁵⁸ Beltway Survey #253.

²⁵⁹ Beltway Survey #605.

course the Alexandria Police would show up and run us off."²⁶⁰ The formality and regularity of the drag races is apparent from this description by a self-described area "native":

Long before the beltway was completed, Cabin John Bridge was there and if you measure it, it makes a great drag strip. We would flag off on the Virginia side, make the run and turn around on the other side. The side from VA to MD is the best side to race, it's actually a bit straighter than the other side. We raced nearly every night of the week. And some of those races were really serious, people came from all over the DC area, some raced for car titles, some raced for what at the time was very big money. We ran a "rail" across it once with the trailer waiting on the other side - 180mph from start at VA end to the MD end was pretty impressive. Only once can I remember anyone actually getting caught - one of the guys was out of the car when the sirens roared and everyone took off so he jumped over the side (right at the beginning where it isn't a great drop) and had no place to hide...the troopers thought it was funny and they didn't write him up for any illegal activity....it was a great 1/4 mile track with no other traffic. It should be noted that they were watching what was called H road by the Pentagon and so racing there was very difficult. This was back when everything with 4 wheels had monster engines (409, 426, 427) and ran like a "striped ass ape" - 300 horsepower was a pansy vehicle, you had to run at least 325hp to get a slot on the "race card." [ellipses in original]²⁶¹

That this woman and her friends raced "nearly every night of the week," in spite of its being "very difficult" because of official surveillance, attests to the allure the empty road must have had for the participating drivers.

In addition to the racers' cars, bicycles and go-karts were regular sights on the unfinished Beltway. Several of my respondents rode their bicycles on the road either as a shortcut or to explore new territory.²⁶² One man has "[f]ond memories of Georgia Ave to Colesville Road over Sligo Creek Pkwy. We used to run go-carts there after it was

²⁶⁰ Beltway Surveys #546, 357.

²⁶¹ Beltway Survey #596.

²⁶² Beltway Surveys 436, 503, 597.

paved but before it was opened to traffic."²⁶³ Carolyn Marion, who grew up in Silver Spring, describes yet another unanticipated use: as a "member of the precisionettes (majorette group) [I] took lessons at the silver spring boys club (forest glen road) and during construction of the beltway, we would practice for parades on the 'road being constructed over the hill from the boys club!'"²⁶⁴

In addition to serving as a social, or more public, gathering site, the roadway also was a private playground to some. One woman, whose house was adjacent to the new highway, felt a sense of ownership, "as though that section of the beltway that was next to our house did in some way 'belong' to us." She took full advantage:

While under construction, my brother and I had a great time taking our bikes down the hill and riding on all that endless pavement that was completely free of cars! It was great! We made little forts underneath the bridge that went back over the beltway next to our house. I remember how incredibly QUIET it was back then. We had a lot of fun before it was opened to traffic.²⁶⁵

Others found solitude by climbing out on the bridge spanning the Northwest Branch in Montgomery County over the deep ravine into which engineer William Shook had descended; one boy and his friend "used to just hang out on the bridge, throwing objects off the bridge, climbing on it, looking out over the river."²⁶⁶ In 1964, this option, as well as the biking, drag racing, go-carting, and parading, disappeared as vehicles entered the Beltway at all hours. But for a few years, the construction efforts of both states

²⁶³ Beltway Survey #259.

²⁶⁴ Beltway Survey #588.

²⁶⁵ Beltway Survey #436.

²⁶⁶ Beltway Surveys #600, 597.

inadvertently created, in lifelong Silver Spring resident Charles Mercogliano's words, "a child's dreamland."²⁶⁷

Closing the Circle

The ceremonies of August 17, 1964, celebrated the grand opening of Interstate 495, by then called the Capital Beltway. In the years after its introduction on the 1950 NCPPC and 1952 M-NCPPC planning maps, the highway had been referred to interchangeably as the Washington Circumferential Highway, the circumferential, the belt road, the belt parkway, the inter-county freeway, the inter-county belt highway, the inter-county belt freeway, and the inter-county belt parkway. Maryland and Virginia officials, working separately, brainstormed during the construction period for names which would fit easier on road signs and would be easier to say.

Maryland's SRC first proposed Colonial Parkway and Colonial Beltway in March 1960, then switched to the Capitol Beltway. Fairfax County officials approved the name Capital Ring, but that bombed at the state level, where the push was on to honor George Mason or George Washington. Virginia conceded and agreed to call its portion the Capitol Beltway. That spelling lasted for four months until M-NCPPC planners responded to criticism that the spelling of "Capitol" with an "O" refers strictly to the building, whereas "Capital" with an "A" indicates the entire federal city. From

²⁶⁷ Beltway Survey #491.

June 1960 forward, the highway was officially designated the Capital Beltway in both states.²⁶⁸

On August 16, 1964, local retailer Giant Food sponsored a cycling tour around part of the (unopened) Beltway, publicized in local newspapers. The event was held ostensibly to promote "an ideal family sport for people of all ages," but, as was apparent from the ads announcing the tour, it also encouraged shoppers to buy the bicycles on sale at 17 area Super Giant groceries. Publicizing this event put Giant in the awkward position of promoting the use of bicycles on a superhighway, which was prohibited throughout the Interstate system. The company acknowledged this problem within its advertisement in small print: "Needless to say, cycling on the Beltway is not permitted; also, cycling on any high-speed thoroughfare is not advised by area cycling clubs, whose members suggest you enjoy scenic roads for this healthful pastime."²⁶⁹ The Giant tour would be the last time bicycles were legally permitted on the Capital Beltway.

The next day, a crowd of at least 3,000 gathered just east of the New Hampshire Avenue interchange at the Montgomery-Prince George's County line, to witness the completion of the entire loop, as officials opened the final 25-mile segment between Old Georgetown Road in Rockville and Pennsylvania Avenue in Prince George's County. Construction on the road had lasted nine years and involved some 80 contractors in Maryland alone (Fig. 7). The total cost for the highway was approximately \$189 million, including \$115 million in Maryland, \$60 million in

²⁶⁸ Dickson, "Capital Beltway: The Medium and the Message," 10; "Maryland Picks Name for Highway," Evening Star, 13 March 1960: B-1; "Capital Planners Right Capital Spelling Error," Evening Star, 23 June 1960: B-3; "New Capital Beltway Name Stirs Roads Commission," Evening Star, 18 August 1960: B-2.

²⁶⁹ Advertisement for Giant Food Inc., Evening Star, 16 August 1964: E-5.

Virginia, and \$14 million for the Woodrow Wilson Bridge (owned by the federal government). Maryland paid \$17,984,692 in right-of-way costs for 832 parcels of land. The Beltway included 38 interchanges numbered consecutively through both states, though four were not in working order by opening day: Exit 9 connected to Interstate 66 which was not yet built; Exit 15 for the George Washington Memorial Parkway would open several months later; Exit 22 was reserved for the Northern Parkway which was never built; and Exit 26 for Interstate 95 north to Baltimore would open in 1971 (Fig. 8).²⁷⁰

Unlike that for previous openings of various segments, the weather held for the day's festivities, although heavy clouds the previous night had forced Kensington aviator Carl Cramer to land his Gaithersburg-bound private plane on the Beltway, between Old Georgetown Road and Wisconsin Avenue.²⁷¹ At the New Hampshire Avenue interchange, the assembled crowd heard speeches from Maryland Governor Millard Tawes, SRC chair John Funk, and Federal Highway Administrator Rex M. Whitton. Dozens of other officials were introduced to the crowd as guests of honor, among them D.C. Commissioners Charles M. Duke and John B. Duncan and former House and Senate leaders instrumental in sponsoring the Federal-Aid Highway Act of 1956 that had created the Interstate system. Whitton spoke glowingly of the functions the new highway would fulfill:

This route means many things to many people. . . . For Interstate 495 is an

²⁷⁰ Lee Flor, "Ceremony Tomorrow Opens Last of Beltway," Evening Star, 16 August 1964: A-1; "Last Leg of 65-Mile Capital Beltway to be Opened Tomorrow by Gov. Tawes," Evening Star, 16 August 1964: E-3; John C. Schmidt, "65-Mile Capital Beltway."

²⁷¹ "Beltway Landing," Washington Daily News, 17 August 1964: 1.

integral part of the 41,000-mile Interstate Highway System. . . Interstate 495 is also a mighty traffic circle, 61 miles around and 17 miles in diameter. It will provide a swift channel for through travel, whether truck, bus, or car. Since it will take them off their present routes through the heart of the city, it will help relieve Washington's in-town traffic congestion, too. Interstate 495 is also a huge wedding ring for the metropolitan area, uniting all of its suburbs. We can be better neighbors—and have better opportunities for employment, recreation, and shopping. And Interstate 495 is a breeding ground for the region's economy.²⁷²

After a series of speeches and a 15-minute delay for Tawes to autograph programs and highway maps for dozens of children, the dignitaries walked to the dual black and gold ceremonial ribbons, symbolizing the state's colors. At 12:40 p.m., Tawes cut the ribbon (some eight miles to the west, Carl Cramer had managed to remove his plane from the highway only a half hour earlier, just in time to beat the forthcoming traffic), and the Capital Beltway was officially open.²⁷³

Tawes, however, was not the first to make the cut. James Landolt, who lived in the Oakview neighborhood near the New Hampshire interchange, had walked to the ceremonies with his family and friends. Years later, he recalled how his father, unnoticed by the media, upstaged the governor:

It seemed like there were about two million kids from the surrounding neighborhoods there and all of them wanted a piece of those ribbons. Governor Tawes was going to cut them to open the Beltway. But we beat him to it. We were standing next to the south post that held the ribbon. I was shocked when my father started asking people for a pocket knife—he was going to cut it before the Governor did and cut pieces to hand out! . . . He had several of us hold the ribbons so they could not tell he had cut it off the post. He went ahead and cut them and started cutting pieces off the hand and handing them out to the crowd. When Tawes cut it—about a minute later—we dropped it and there was a big rumble for the rest of it. We pocketed a few pieces and

²⁷² Whitton, "The Minus-Ten-Minute Road."

²⁷³ Lee Flor, "Ceremony in Maryland Opens Last of Beltway," Evening Star, 17 August 1964: A-1; Mike Causey, "Tawes Snips a Ribbon, Opening D.C. Beltway," Washington Post, 18 August 1964: B1; "Beltway Landing."

walked away. . . . Being an adult now over 35 years later, I still can not believe he did that.²⁷⁴

After the ribbon-cutting, spectators dashed for their cars, which were lined up two miles deep "like jet pilots on red alert." Immediately the Beltway experienced its first traffic jam, which took state and county police officers 20 minutes to clear.²⁷⁵ Drivers sped off at the temporary 45 mile-per-hour speed limit, which would later be raised to 60 after workers completed landscaping and erecting permanent signs; in Virginia, the initial speed limit was 65 miles per hour.²⁷⁶

The Washington media treated the opening as a major event. The Evening Star ran a special section devoted to the Beltway, essentially an opening-day program, and lauded in an editorial:

This magnificent stretch of superhighway is by all odds the most exciting and in many respects the most important public works project ever built in the Washington area. Practically as well as symbolically, it unifies the entire region. It will drastically change the transportation habits of thousands of residents.²⁷⁷

Editors at The Washington Post agreed that "[t]here is a danger of using too many superlatives, but there is no doubt that the dedication of the Capital Beltway today is a major event for the entire Washington area." The Post's editorial noted that the Beltway

²⁷⁴ James Landolt, e-mail to Jeremy Korr, 17 December 2000.

²⁷⁵ "Commuters Give Beltway First Test," Evening Star, 18 August 1964: B-1.

²⁷⁶ Flor, "Ceremony Tomorrow." For one reporter's notes on his circumnavigation of the Beltway immediately after the ribbon-cutting, see Samuel Stafford, "Our Men Buckled Down to the Beltway," Washington Daily News, 18 August 1964: 14.

²⁷⁷ "Ring Around the City" [editorial], Evening Star, 16 August 1964: B-4.

would "buckle together scattered suburbs," create new neighbors, and encourage residential and commercial developments within close range of the highway.²⁷⁸

This "buckling together [of] scattered suburbs" was perhaps most dramatic in the connections the Beltway provided between Virginia and Maryland. Before the two Potomac River bridges opened, drivers had to head into Washington to move between the two states. The improved access made it much more reasonable for residents of one state to consider shopping or working in the other. A local Virginia newspaper projected months before the grand opening that the Beltway would bring "Maryland and Alexandria 'closer' to Fairfax residents, and Fairfax 'closer' to Maryland and Alexandria residents."²⁷⁹

In the weeks before the opening ceremonies, Charles County, Md., to Washington's southeast, ran a two-page spread in several Northern Virginia newspapers advertising its proximity via the Beltway. Across the top of the advertisement was the banner "Not a stoplight from Fairfax to Maryland on New Circumferential Highway, Rt. 495." The center of the spread included directions to "take newly opened Capital Beltway #495 past Alexandria across Woodrow Wilson Bridge" before heading south on Branch Avenue (Route 5) to Charles County. Smaller ads within the spread for Buddy's Steak House, Smitty's Steak House, Jimmie's Paddock Restaurant and Motel, and the Pirates Den restaurant all specified "35 Minutes from Fairfax County via Circumferential Hwy. 495." Fairfax County, of course, became equally accessible to

²⁷⁸ "Closing the Ring" [editorial], Washington Post, 17 August 1964: A16.

²⁷⁹ "Impact," Fairfax City Times, 3 April 1964: 2.

Charles County residents, as did many other area jurisdictions with respect to one another.²⁸⁰

Drivers around the region loved the Beltway, at the very beginning. Many viewed it as an enormous advance in quality transportation, with its limited access, lack of traffic signals, multiple lanes, and wide medians. So smooth were the initial weeks that an urban legend developed that local bars were experiencing a drop in business because workers could no longer call home after work and claim to be stuck in traffic, while actually catching a quick drink.²⁸¹ Readers flooded the Washington papers with letters of praise:

All I can say is from my point of view "it is the best thing since the invention of the wheel"! The persons responsible for it being built are to be congratulated.

Time saved: morning 20 minutes, evening 45 minutes. No lights. No stops.
Extra mileage: 0 miles.

I can now get to work in 35 minutes instead of the hour and 15 minutes it used to take.

It saves me 15 to 20 minutes and considerable aggravation. The scenery is beautiful, too.

Thanks to the interstate highway engineers the Washington area has shrunk—so that we may well appropriate the name of one of our suburbs and use the term "Beltsville."²⁸²

Within two months of opening, the Beltway was attracting as many as 47,000 vehicles per day, nearly exceeding the projections of both states for years in the future. Traffic dropped by 13 percent on the 14th Street Bridge, a key river crossing in Washington

²⁸⁰ Advertisement for Charles County, Md., Fairfax City Times, 7 August 1964: 10-11.

²⁸¹ Dickson, 10; Van Dyne, "Getting There," 202-203.

²⁸² Letters to the editor, Evening Star, 23 August 1964: A10.

which drivers could now avoid by taking either the Beltway's two bridges across the Potomac.²⁸³ Maryland, meanwhile, dealt with extra land it had condemned but no longer needed for the Beltway by leasing sixteen acres to Prince George's County, which worked with the U.S. Department of Transportation and the Penn Central railroad to build a suburban station for the company's Metroliner trains; that "Capital Beltway" Metroliner station is now Amtrak's New Carrollton station.²⁸⁴

Lost in the excitement in the autumn of 1964, at least initially, was recognition that the Beltway was not a godsend to everyone. In the weeks after the grand opening, as commuters, politicians, and developers fell over each other in their eagerness to praise the new highway, a trickle of dissent emerged in the newspapers' letters pages and in neighborhood conversations. In September 1964, Evening Star writer Anne Christmas noted that even as the "Baby Beltway has us ga-ga" and had inspired some enthusiasts "to regard its miles of cold concrete with the same warm emotion usually engendered by a beloved, flesh-and-blood human being," others living near the road "rate the new highway as a gargantuan monster that threatens not only their sleep, but also the safety of their children and dogs."²⁸⁵

Published one month after the opening ceremonies, Christmas's article scratched the surface of a side of the Beltway's development which had long been carefully

²⁸³ Lee Flor, "14th Street Bridge Load Cut 13% by Beltway," Evening Star, 4 October 1964: B-1; "47,882 Cars Fill Beltway on Weekday," Evening Star, 11 October 1964: C-1.

²⁸⁴ Jim Norell, "The Great Beltway Station Disaster," Washingtonian, March 1971: 36-41.

²⁸⁵ Anne Christmas, "Baby Beltway Has Us Ga-Ga," Evening Star, 17 September 1964: B-2.

hidden from public view. The many articles and speeches commemorating the highway's opening almost completely glossed over the difficulties in bringing the Beltway to fruition, even though a major protest, national in scope, had almost prevented the road's construction a decade earlier. As we will see in Chapter 9, Whitton and the newspaper editors were correct in their assessments that the Beltway would unite the region and would spur development, but they neglected to mention that those benefits would come at a price. Who paid the price? How was it negotiated? Was it worth it for those who paid and for the larger population of people who used the Beltway? In the next chapter, I look at the other side of the coin and examine what conflicts were papered over to reach the consensus represented by the completion of the Beltway.

CHAPTER 5

"THIS WAS A NICE PLACE": CONFLICT AND ANGER

My parents bought this house in January of 1960. There were woods in the back yard, and a creek where we caught tadpoles and frogs, and animals, rabbits and chipmunks and deer. We had a wonderful garden, hung our clothes in the yard, kept doors and windows open in the summertime. We would have picnics in the back yard. It was the perfect place to be a kid. When the beltway arrived, it was dirty and noisy, still is. Rats replaced the rabbits. The house stayed closed, no more picnics. We became an easy target for thieves. Of course, it was always fun being awakened by people who had had accidents behind the house, pounding on your door in the middle of the night. The beltway ruined a beautiful neighborhood, mine, and I don't like it. —Lisa Loflin, 2000.²⁸⁶

In 1980, the consulting firm of Payne-Maxie published for the U.S. Departments of Transportation and Housing and Urban Development an extensive analysis of the land use and development impacts of beltways nationwide. In Chapter 9, I will return to what Payne-Maxie found and will compare their conclusions to those in other studies of American beltways. Unlike those other studies, however, Payne-Maxie explicitly recognized the dynamics in the original planning process which led to beltways—including the Capital Beltway—becoming at once a boon to many drivers and a scourge to the communities through which they passed. The 1980 report stated:

Oriented to engineering, the Interstate program initially did not include rigorous planning requirements. . . . Not until the Federal-Aid Highway Act of 1978 was legislated were transportation planners forcefully encouraged to tie their planning to land use planning and to recognize the socioeconomic, environmental and energy implications of particular transportation projects. As a result, beltway planning in the 1940s and 1950s mainly involved coordination with local agencies and little analysis of the effects of highways on urban areas: alternatives rarely were evaluated comprehensively, and land use and infrastructure impacts for the most part were given little attention.

²⁸⁶ Beltway Survey #542.

Further, effects on central cities and urban revitalization programs were not examined, nor were impacts on development patterns assessed.²⁸⁷

In short, beltways, like other Interstate-type highways, were regularly construed by their designers as decontextualized engineering projects. In their conversations with me, original engineers Isadore Parker, Fred Pavay, and *Sidney Miller each reaffirmed that the Capital Beltway was one assignment among a lifetime of assignments; their primary concern was to create the best road they could to handle traffic efficiently and safely, and any additional effects, for better or worse, were incidental and outside their purview.

Payne-Maxie's assessment of the planners' and engineers' mindset is written in the passive voice (thereby deflecting responsibility from any particular individual or group), but that mindset created social and environmental effects that were anything but passive. The first signs of these effects appeared at the outset of the planning process, when the residents of Berwyn and Greenbelt voiced their concerns over the initial routing of the Beltway; in neither case did the M-NCPPC or SRC actually respond directly to the specific concerns brought forward, a harbinger of things to come. Furthermore, the Beltway had to go somewhere, and although much of its alignment went through sparsely developed woods and farmland, some of it did not. How the planning and highway authorities responded to the implications of that scenario would go a long way toward determining how displaced residents and business owners themselves would react. Consistent with Payne-Maxie's analysis, officials gave minimal attention to this concern, which loomed large in the lives of the individuals affected.

²⁸⁷ Payne-Maxie Consultants, The Land Use and Urban Development Impacts of Beltways: Executive Summary (Washington, D.C., 1980), 5-6.

Highway officials in both states downplayed the extent of displacement caused by the Beltway's construction relative to the effects of other highways. Lester Wilkinson, who reserved the right-of-way for the Beltway in Prince George's County, remembered that "[t]here were some [displacements]. Obviously. It's almost impossible for a highway that big to go all the way through a county without displacing a few homes. But essentially at that time it was all undeveloped land."²⁸⁸ Virginia engineer F.L. Burroughs, writing in 1961, similarly noted that "[s]ome public inconvenience has been caused because of the displacement of people and their homes. However, I think it is remarkable that fewer than 100 houses had to be taken."²⁸⁹ Both Burroughs and Wilkinson speak about displacement in technical, non-emotional terms; they focus on the overall positive note that relatively few people were affected, but do not address the types of effects the displacement had on those individuals. Nor did those displaced have much chance themselves to express their concerns.

Public hearings on the Beltway's construction, though extremely limited, did exist. Before the late 1950s, planning officials designed and built highways virtually unchecked. Under the Interstate program after 1956, the federal government required states to hold some form of hearing to incorporate the public into the planning process. So both Virginia and Maryland did hold public hearings—at least one apiece—while planning the Beltway. However, in my research examining three major newspapers, over a dozen county or community papers in both states, and records from Maryland's SRC and M-NCPPC and Virginia's VDH, I found no mention of any public hearings at

²⁸⁸ Interview with Lester Wilkinson.

²⁸⁹ Burroughs, "The Capital Beltway," 36.

all—let alone any changes the states made in response to them—during the entire 1952-1964 planning and construction period, beyond the following two.

Local newspapers announced in April 1957 that Virginia would hold a public hearing at Annandale High School on the 19th of the month. The announcement itself served notice that the purpose of the hearing was not so much to solicit residents' suggestions as to reveal to them what decisions the highway department had already made. A small announcement in the legal notices of the Fairfax Herald read, in part:

In accordance with provisions of the 1956 Federal Highway Act, a public hearing will be held by a representative of the State Highway Department . . . for the purpose of considering the proposed location of the Interstate Highway . . . known as the Virginia Metropolitan Area of Washington, D.C. Circumferential Route, 22.1 miles.²⁹⁰

A community newsletter highlighted the point that residents would be seeing plans already developed, noting that at the hearing, "presumably, the proposed location of the entire 22.1 mile highway will be unveiled."²⁹¹ Other than a passing reference a week later in another local paper that community representatives lobbied at the hearing for as many interchanges as possible in their respective areas (to bolster commercial access and development), the print media were quiet on the April 19 hearing and any others that may have been held.²⁹²

In Maryland, the record is more silent still. A contentious public hearing was held in 1959 in Cabin John, Md., but I have found no reference to it in any source other

²⁹⁰ "Public Notice," Fairfax Herald, 19 April 1957: 8.

²⁹¹ Fairfax Newsletter, 6 April 1957: 4. In Virginia Room, Fairfax County Public Library.

²⁹² "Chamber Asks Three Links With New Road," Fairfax County Journal-Standard, 26 April 1957: 8.

than a single transcript. Fulfilling federal obligations under the 1956 Federal-Aid Highway Act, the State Roads Commission invited residents to a hearing at Glen Echo Town Hall on December 17, 1959. The transcript of the meeting leaves no doubt that there was some degree of heated opposition toward the Beltway's construction beyond the Rock Creek Park segment.

At least a dozen residents of Cabin John and Bethesda testified in no uncertain terms against the construction of the Beltway leg through their communities; residents of Cabin John were especially irate that the new road would decimate their healthy and quiet neighborhood (Fig. 2). Representative of their concerns was A.M. Dodson of Cabin John, who insisted that he and other Cabin John residents "would not hold still for being carved up in any manner that would ruin our community as a place [sic] to live in."²⁹³ But what frustrated Dodson and the other attendees even more was the absolute intransigence of the highway officials, who through the entire hearing offered no sympathy or even acknowledgment of the points they were hearing again and again. The transcript shows State Roads Commissioner John Funk and other officials responding to each speaker by repeatedly dismissing their concerns through reference to a greater good or by moving to the next speaker with no comment at all. Cabin John residents had their hearing, but in their view, they were not meaningfully heard.²⁹⁴

²⁹³ Transcript of Proceedings of Public Hearings by the Maryland State Roads Commission on the Proposed Interstate Route 495 and the Cabin John Connection to the George Washington Memorial Parkway, Dec. 17, 1959, Glen Echo Town Hall (Washington, D.C.: Hart & Haskins, Shorthand and Stenotype Reporting, 1959), 75.

²⁹⁴ This transcript is the only reference I found to this contentious public hearing; even former SRC officials claimed no recollection of it. My discussion here draws on the copy held in the M-NCPPC archives in Wheaton, Md., which the facility's archivist produced for me during a research visit in early 1998. Unfortunately, in responding to repeated future requests, she was unable to find the document again, a function of the

This was not a surprise. Nationwide, the first generation of public hearings for Interstate highways progressed much the same as at the Glen Echo Town Hall. Highway officials, unaccustomed to having their plans checked, much less altered, used their federally mandated public hearings to show the public what plans they had made, but were not prepared yet to incorporate the public in more substantial ways. This was apparent even at the time. Landscape historian Grady Clay, writing from his own experience, offered this contemporary account in 1958:

What about public hearings? I cannot speak of the thousands of hearings I have not seen, but from some personal observation I am forced to conclude that the public hearing is a carefully staged performance designed to show the audience why the route officially agreed upon in private cannot be changed. As one of the British motor magazines recently described it, these are affairs where "at worst, aggrieved persons may hear very sound reasons why things cannot be altered." The burden of proof is placed on the private citizen, who often is poorly informed and easily buffaloed by technical mumbo-jumbo. . . . In other words, don't make any fuss about the route we've already picked. Just be thankful. And if not, be quiet.²⁹⁵

Since there were no official venues where residents or others could express their concerns over the Beltway and have them meaningfully addressed, officially there was no serious opposition to the Beltway. But it was there. In some cases, as in Cabin John, residents had social concerns; in others, as in Rock Creek Park, the concerns were environmental. In all cases, residents found themselves let down by planners' and officials' responses, or more often their lack of response.

In this chapter, I discuss episodes in which the Beltway's construction or operation sparked social or environmental concerns—sometimes both at once—and

unfortunate virtual absence of cataloguing in the M-NCPPC archives, a major hindrance to research.

²⁹⁵ Grady Clay, "The Tiger is Through the Gate," Landscape Architecture 49.2 (Winter 1958-1959): 80-81.

how those conflicts played out. These case studies directly address the issues of power, access, and competing meanings raised in the fifth operation of the cultural landscape study model. The first section, which focuses in depth on one segment of the Beltway, also looks at the tensions between the cultural and natural components of the landscape and the perceptions underlying those tensions, as suggested by the model's third and fourth operations. The second section, which discusses the Beltway's effects on the lives of individual neighbors, addresses aural and other sensory aspects of the Beltway, playing off the multisensory dimensions of cultural landscapes as noted in the first operation. Together, these case studies suggest that the effects the Beltway had on communities, individual lives, and parts of the natural landscape were not nearly as negligible as its original designers claimed.

The Disappearing Parkway

Although Maryland began construction of its portion of the Beltway some two years before Virginia, its first section built and opened turned out to be the most controversial leg of the entire loop. The 1.5-mile section of the highway passing through Rock Creek Park in Montgomery County proved to be a Pandora's box which still has not closed. The nearly forgotten battle over the road's construction witnessed the unusual convergence of five governmental agencies with overlapping jurisdiction, multiple judicial challenges, ambiguously defined legal terms with critical consequences, impassioned debates on the floor of Congress, and the imposition of a new set of rules, resulting from the creation of the Interstate Highway System, in the midst of the controversy. In hindsight, it remains unclear who "won" this early freeway

face-off. While the road was eventually built, the final result--a serpentine pattern well-known to Washington commuters as the "Roller Coaster"--was neither the originally planned highway nor any of the compromises reached during the course of the controversy. Still, the battle over the "belt parkway" in the early 1950s, at a time when highway planners nationwide took little notice of challenges to their plans, opens a window into what some Maryland residents and planning and political officials considered acceptable in the realm of highway building, why they felt that way, and how they engaged in dialogue at a time even before the ineffective public hearings of the Federal Highway Act of 1956 had been instituted.

Even as construction of the Beltway began in February 1955, with a bridge over Cedar Lane in Kensington, just inside Rock Creek Park, the road itself was on trial in the federal courts and in the Senate. At issue was the Beltway's routing through the Montgomery County portion of Rock Creek Park. This piece of parkland was a northern extension of the better-known Rock Creek Park in the District, itself owned and maintained by the National Park Service. North of the Maryland/Washington border, however, Rock Creek and its surrounding forest were not federal property. Maryland had acquired its share of Rock Creek Park under the federal Capper-Cramton Act of 1930, discussed below. As a result, while Rock Creek Park (Washington) and Rock Creek Park (Maryland) often appeared indistinguishable to the public, Maryland's section was in fact subject to a confusing array of restrictions and overseeing authorities, established by the Capper-Cramton Act and concurrent state legislation.²⁹⁶

²⁹⁶ George Beveridge, "Road Dispute Poses a Query on 'Parkway,'" Evening Star, 22 November 1953: A-12.

Although some overlap appeared inevitable between the east-west leg of the Beltway and the north-south stream valley park, more efficient planning might have sidestepped this episode altogether. In 1955, the SRC claimed that the earliest highway planning maps showed a beltway-prototype road from the 1940s which ran the route north of Rock Creek Park (Maryland). But by the time the Beltway appeared in the M-NCPPC's 1952 master plan, that agency's engineers realized that intense residential development and some poor topographic conditions had eliminated the northerly option.

For other planned highways, the M-NCPPC used its zoning and land reservation authority to discourage or stop development along a planned route. But since the beltway was not formally articulated on a master plan until the early 1950s, the agency had not taken such steps soon enough to prevent development along a northern route. Seeing no choice, officials from the M-NCPPC and the NCPC, which shared jurisdiction for Rock Creek Park (Maryland), agreed on a route which sent the Beltway across the park.²⁹⁷

This proposal raised two related problems, which together set the stage for years of debate. First, residents of the neighborhoods surrounding Rock Creek Park (Maryland) were loath to see the park's relative tranquility compromised by an expressway. Their concern was exacerbated by a piggyback proposal to build a second highway through the park at the same time. The Washington National Pike (successively designated U.S. 240, I-70S, and I-270) was built in bits and pieces between Frederick and Bethesda between 1952 and 1960. At Pooks Hill in Bethesda,

²⁹⁷ Beveridge, "Inter-County Belt Work."

the future junction of that highway and the beltway, U.S. 240 was originally planned to continue southward into Washington along the Wisconsin Avenue corridor.²⁹⁸

Because of vocal opposition to this route by business owners and residents along Wisconsin Avenue, SRC engineers proposed a different routing to bring U.S. 240 into Washington. Under this Rock Creek route, the highway would run south from Frederick to the Beltway (along the current path of I-270), run eastward concurrently with the Beltway along part of Rock Creek Park (Maryland), then dip south through the park toward and into Washington. Rock Creek area residents did not want the Beltway passing through the park in the first place; they certainly did not want that section doubling as a second heavy-traffic highway which would eat further through the park. They were even more upset that the proposed southern extension of U.S. 240 would, after thoroughly disrupting the park, indefinitely dead-end at East-West Highway in Chevy Chase until District officials decided to extend 240 into the city.²⁹⁹

In August 1953, members of the Rock Creek Hills and Parkwood Citizens' Associations requested that Rock Creek Park routings be prohibited both for the Beltway and U.S. 240. By October, those groups had been joined by the Forest Glen and Locust Hills communities and the Citizens' Action Committee for Fair Road

²⁹⁸ Bredemeier, "I-70S."

²⁹⁹ Maryland-National Capital Park and Planning Commission, Staff Report on Feasibility Studies for the Extension and Location of U.S. 240 to Connect with the District of Columbia, January 1958 (Silver Spring, MD, 1958), 1-7; Maryland-National Capital Park and Planning Commission, Staff Feasibility Studies for Location of a Proposed Wisconsin Avenue Expressway, January 1959 (Riverdale, MD, 1959), 2; Coit Hendley, Jr., "How U.S. 240 and the Belt Route Would Affect Rock Creek Park," Evening Star, 13 August 1953: A-32.

Planning, headed by local resident and former U.S. senator Gerald P. Nye. In a prepared statement, Nye argued that

the persistence of the Maryland State Roads Commission and certain members of the Maryland-National Capital Park and Planning Commission in demanding access to reaches of Rock Creek Park for highways and belt routes would seem to make it clear that what they seek is free land for superhighways. Obviously, if they succeed in using four or five miles of Rock Creek Park for the proposed belt, they will have established a precedent, one which could ultimately make Sligo Parkway and Anacostia Park the normal continuing route for the belt around the east side of Washington.³⁰⁰

In fact, Nye's concern about setting precedent for opening stream valleys to highway development was not unfounded. In 1946, the M-NCPPC had submitted a confidential report to the U.S. presidential budget office proposing limited-access parkways through the very stream valley corridors Nye mentioned as well as several others.³⁰¹

Beyond the worries over adverse environmental effects to Rock Creek Park and to its abutters, the proposed Beltway routing also raised a sticky legal issue. Residents' complaints aside, could an expressway legally be constructed in the park in the first place? Members of the Parkwood Citizens' Association argued that their subdivision's developer had sold the adjacent section of parkland to the M-NCPPC in 1938 with the contractual restriction that the land be developed "as a parkway to be used and maintained as part of the Rock Creek Park system." If the NCPC had known about that

³⁰⁰ Qtd. in "Belt Highway Plan for Rock Creek Park Opposed by Citizens," Evening Star, 14 October 1953: A-8.

³⁰¹ "Planners Asked to Revise Stand on Belt Route," Evening Star, 7 August 1953: B-1; Maryland-National Park and Planning Commission, "A Program for Park Purchase in the Maryland-Washington Regional District," M-NCPPC archives, Wheaton, MD.

restriction, Parkwood residents said, it would not have approved the Beltway's routing through the park.³⁰²

The problem lay in the terminology. The 1938 stipulation required that the parkland be developed as a parkway. What exactly is a parkway? The local press had referred to the highway interchangeably as a "belt highway" and a "belt parkway." If it was in fact a parkway, the problem would become moot. This question--was the Beltway in actuality a parkway--took on paramount importance after the parties involved reread the fine print in the Capper-Cramton Act which governed the park.

On May 29, 1930, Congress had passed an omnibus cultural resource management package for Washington, D.C. and its suburbs. The Capper-Cramton Act

provided \$33 million for the development of parkways along both shores of the Potomac River and the extension of Rock Creek Park into Maryland, as well as protection of the historic Chesapeake and Ohio Canal, three forts, and the river gorge of Great Falls, under the blanket auspices of the acquisition of lands in the District of Columbia, Maryland, and Virginia for the national capital's comprehensive park, parkway, and playground system.³⁰³

Washington's section of Rock Creek Park had been created by an act of Congress in 1890, following decades of proposals. Some forty years later, under Capper-Cramton and concurrent Maryland legislation, the state acquired the northern extension of Rock Creek Park. Maryland paid two-thirds of the acquisition costs; the federal government covered the remaining third. Maryland held title to that section of the park and was

³⁰² "Planners Asked," Evening Star.

³⁰³ Leach, "Fifty Years of Parkway Construction," 188-189.

charged with developing it (subject to restrictions in the Capper-Cramton Act), but the federal NCPC retained control over approving the actual development decisions.³⁰⁴

Until the Beltway question arose, discussion of Rock Creek Park in political and environmental contexts had generally focused on the better-known Washington section. In 1953, the spotlight shifted to the newer Maryland portion and the unfamiliar dynamics introduced by the obscure Capper-Cramton law. For Washington's Rock Creek Park, the appropriateness of a parkway--a road conceived as a means for providing access to that recreational area--had never been in doubt. Completion of the Rock Creek and Potomac Parkway in Washington was delayed nearly forty years by seemingly endless squabbles in securing congressional approval, a final design, and funding, but the project itself was long considered a done deal. Certainly there was no disagreement over whether that road would truly be a parkway.³⁰⁵

But unlike the Rock Creek and Potomac Parkway, the Beltway was never conceived by anyone in primarily recreational terms. Because of the stipulations in the Capper-Cramton Act, this distinction posed a serious roadblock. As noted above, the law's preamble specifically designated its purpose as provision for the "comprehensive park, parkway, and playground system of the area." As such, any development in Rock Creek Park (Maryland) would need to be shoehorned into the categories of park, parkway, or playground. Parks and playgrounds made no sense in this context. One choice remained: to overcome this legal obstacle, state officials needed to position the

³⁰⁴ Davis, "Rock Creek and Potomac Parkway," 137; Beveridge, "Road Dispute"; Hendley, "How U.S. 240"; Linda Wheeler, "Georgetown Gets a Waterfront Park," Washington Post, 29 October 2000: B4.

³⁰⁵ Davis, "Rock Creek and Potomac Parkway," 143-144.

Beltway leg as a parkway in the eyes of the National Capital Planning Commission, the ruling authority in this case.

The future of the Beltway thus came down to two questions. Was this segment legitimately a parkway—and what defined a parkway to begin with? The significance of these questions came into full public view on October 30, 1953, when NCPC chair Harland Bartholomew approved the use of Rock Creek Park (Maryland) for the Beltway, on the grounds that within the park's boundaries, the Beltway would be a parkway. Bartholomew explained that the Beltway segment would be built at "substantially a parkway standard" and that there would be coincident development of the park's recreational facilities. Defining a parkway as a "special type of automobile travelway of more than ordinary width and having park-like characteristics," Bartholomew confirmed that the proposed Beltway leg would meet the stringent legal requirements.³⁰⁶ This strategy of shielding an environmentally sensitive highway under the term "parkway" was not unusual, as Timothy Davis explains:

Highway engineers . . . had little use for the expensive amenities and scenery-saving measures endorsed by landscape architects, and saw little need to accommodate park concerns once widespread legal endorsement of limited-access freeway construction rendered the protective "parkway" designation superfluous. Highway engineers and transportation planners were eager to cloak their express highways under the more appealing term parkway, however, when the roads they wanted to develop encroached on existing or proposed park lands.³⁰⁷

³⁰⁶ Beveridge, "Road Dispute." For a comprehensive survey of the development of the American parkway, see Davis, "Mount Vernon Memorial Highway," 29-104. See also Nelson M. Wells, "The Parkway Influence on Highway Design," Landscape Architecture 49.2 (Winter 1958-59): 92-94.

³⁰⁷ Davis, "Mount Vernon Memorial Highway," 848. Davis adds that Maryland and D.C. traffic officials practiced this approach freely in the Washington metropolitan area (848).

In the case of the Beltway leg, local residents sensed the chicanery inherent in Bartholomew's application of the parkway strategy. Three weeks after his announcement, six Maryland residents filed suit in federal court to challenge his ruling with its generous definition of a parkway. The obvious argument from a modern standpoint—how could an interstate highway be considered a parkway—could not have been made, because the interstate system was still three years from authorization. Still, the litigants argued that the Beltway was clearly a multi-lane, limited-access, high-speed highway, a key piece of Maryland's transportation network, and that it did not conform to the restrictions concerning parks and parkways. Conrad Wirth, the National Park Service director, was the only NCPC member to agree with this argument. Wirth defined parkway as "an elongated park, with a road usually used to connect two or more parks." As such, he considered the beltway's use of the park to be a direct violation of the federal legislation.³⁰⁸

Wirth's definition gave primacy to the "park" and secondary emphasis to the "way." Alternative definitions reversed the order and focused on the road itself. The American Association of State Highway Officials (AASHO) defined a parkway as "an arterial highway for non-commercial traffic, with full or partial control of access, and usually located within a park or ribbon of park-like development."³⁰⁹ The Beltway would not link two parks, as per Wirth's definition, but could conceivably meet the AASHO standards if commercial traffic were prohibited—a concern to business interests, but not an insurmountable one. Parkway design recommendations issued by

³⁰⁸ Beveridge, "Road Dispute."

³⁰⁹ Ibid.

the Secretary of the Interior in 1935 and the BPR in 1938 seemed to slightly prioritize the park over the road, but the issue was still sufficiently muddled for the Department of the Interior to complain in 1944 that "to date, Congress has not defined parkways. Legislation pertaining to parkways is piecemeal and lacks uniformity."³¹⁰ This issue remained unresolved into the next decade. Thus in 1954, the lexicographical question before the federal appeals court, in the case of the Beltway-parkway, was to settle among competing definitions: was a parkway contingent upon its park or its way?

There was no ambiguity on this issue from the perspective of Louis C. Cramton, co-author of the 1930 legislation authorizing the Rock Creek Park extension, which included the controversial parkway stipulation. While the NCPD tried to convince the federal court that the Capper-Cramton "parkway" designation applied to the proposed Beltway leg, Cramton made clear in a letter to the commission that its interpretation was wrong:

To save for the Nation in its greatest value Rock Creek Park, we . . . proposed Federal and Maryland cooperation that would extend the Rock Creek Park values for miles into Maryland. We had the very fullest cooperation of Maryland authorities at the time, including Governor Ritchie. The extension was authorized, and the result was the wonderful Rock Creek Park of today extending for miles into Maryland.

All of this was park planning, not setting aside a great valley as a possible site for a 4-, 6-, or 12-lane highway. And to open that valley today in any part of it to such superhighway use opens the door wide to ultimate destruction of the most beautiful park any capital city enjoys. There is an attempt in some quarters to call this wonderful park area a parkway. And when they do that they put all the emphasis on the second syllable and would have it become "way," dropping all emphasis on "park." It is not a parkway and was never intended to be a parkway. In the days of Theodore Roosevelt, Rock Creek became world famous as a park. The Capper-Cramton law says nothing about extending a parkway. It does propose and does extend that great park for many

³¹⁰ Qtd. in Leach, 186.

miles not as an avenue by easy vehicle approach to a city that already has more street traffic than it can endure.

I, therefore, appeal to your Commission to close the door with definiteness to any alluring proposals that involve preeminence of highway use in any part of this park. Highways, of course, were to be permitted, but only as necessary incidents to public use of these delightful areas. Pending proposals would reverse the situation and make highway use preeminent and any recreation use only incidental.³¹¹

Federal Judge Matthew F. McGuire heard arguments in March 1954 for the U.S. Court of Appeals for the District of Columbia. Speaking for the Rock Creek valley residents, attorneys J. Joseph Barse and Edward Northrup contended that the Beltway was planned exclusively as a major highway, not as a facility to serve Rock Creek Park (Maryland). The Capper-Cramton Act's reference to parkways indicated roads which distinctly served the parks, not thoroughfares incidentally passing through those parks. As a result, the planned Beltway leg neither benefited the park nor could be defined as a parkway. Barse and Northrup asked McGuire to declare the NCPC's approval of the Beltway segment illegal on these grounds.³¹²

Assistant U.S. Attorney Oliver Gasch pushed for dismissal of the case, arguing that the NCPC clearly recognized its legal responsibilities and had pointed out explicitly that it would approve the road only if it met all required standards. The Capper-Cramton Act, Gasch noted, inarguably gave the NCPC authority over the park's development, and this case represented a reasonable use of that authority.³¹³

³¹¹ Louis C. Cramton to National Capital Planning Commission, June 8, 1954, qtd. in Congressional Record, 101:1033.

³¹² George Beveridge, "Court Studies Dismissal of Belt Road Suit," Evening Star, 24 March 1954: A-21.

³¹³ *Ibid.*

McGuire refused to rule in favor of either side, since neither had provided specific plans showing where and how the road would cut through the park. Within weeks of McGuire's non-ruling, the Olmstead Bros. firm of Brookline, Massachusetts, submitted a plan subsequently approved by the NCPC in June 1954, stipulating that the southern leg of U.S. 240 would not be built from the beltway south through the park. While the M-NCPPC's chairman, Robert M. Watkins, considered the NCPC's decision a "clear-cut approval" for the Beltway leg, the final ruling would need to come from the Court of Appeals.³¹⁴

On July 27, 1954, Judge Edward A. Tamm threw out the lawsuit, effectively ruling that the NCPC did have the authority to approve the beltway through Rock Creek Park (Maryland). Tamm explained that Barse and Northrup had raised a number of pertinent "collateral issues," but that Congress clearly had vested authority in the NCPC to make decisions concerning the approval of the park's development, and that the commission had made such decisions. Arguing in vain for a full trial, Barse called the Olmstead Bros. plans "window-dressing to try to make this highway fit the category of some kind of parkway."³¹⁵

Barse asked Tamm to issue a temporary injunction to halt construction. Tamm declined, but the appellate court to which Barse then appealed agreed to hold up construction of the Beltway leg through the park, to the consternation of the NCPC and

³¹⁴ "Court Denies Motion to Throw Out Suit on Belt Freeway," Evening Star, 4 May 1954: A-2; George Beveridge, "Planners Get Detailed Plan on Belt Road," Evening Star, 21 May 1954: A-19; George Beveridge, "Road Decisions by Planners Renew 2 Fights," Evening Star, 11 June 1954: A-19.

³¹⁵ George Beveridge, "Appeal Planned With Dismissal of Parkway Suit," Evening Star, 28 July 1954: A-17.

M-NCPPC. However, in September, the appellate court rejected the motion for a permanent injunction, apparently clearing the way for work on the road to begin at last. Maryland officials planned to move immediately and take no chances on further delays from opponents. "[T]he [State Roads] Commission," according to its chief, Russell H. McCain, "directed its chief engineer to instruct consulting engineers to proceed as rapidly as possible in connection with completion of detailed contract plans for the construction of the intercounty belt parkway which involves the use of certain parklands."³¹⁶

But the parkway fight was not over; the battlefield now shifted from the courts to the legislature. Gerald P. Nye, still in a leadership role with the citizens' associations protesting the Beltway leg, turned to his former colleagues in the U.S. Senate and encouraged several of them to inquire formally into the controversy. James E. Murray, a Montana Democrat, accepted Nye's invitation. A dramatic beat-the-clock sequence of events ensued.³¹⁷

In January 1955, Murray, Chairman of the Senate Interior and Insular Affairs Committee, introduced legislation drafted by the National Park Service which "would require the National Capital Planning Commission to rescind its permission for the beltway leg, restrict its approval of subsequent roads in the Maryland park, and proscribe additional roads in the District park without specific congressional

³¹⁶ "Maryland Planners Again Assail Foes of Park Belt Road," Evening Star, 25 July 1954: A-16; "Maryland to Hasten Plans for Contract on Belt Parkway," Evening Star, 23 September 1954: A-1.

³¹⁷ Beveridge, "Inter-County Belt Work."

approval."³¹⁸ Speaking to the Senate, Murray offered a joint resolution "to prevent what has been described to us as a threat to Rock Creek Park in the Greater National Capital Area. . . . This modern superspeed highway, while bearing the name of a 'parkway,' would of course destroy, in its area of the park, the scenic and recreational purposes for which the park was intended." During the same week that the Senate opened its hearings on Murray's bill, the Ralph E. Mills Co. of Salem, Virginia, began construction on the beltway's first project, a \$143,000 bridge over Cedar Lane, just inside the southern boundary of Rock Creek Park (Maryland).³¹⁹

At hearings on Murray's proposal, John M. Butler, a Republican senator from Baltimore, requested that Congress refrain from "invading the sovereign rights of Maryland" by removing itself from what was fundamentally an internal state matter. Other Maryland politicians and officials agreed, as did the Bureau of the Budget, which considered the bill redundant in light of existing legislation. But Murray rejected those arguments on the grounds that Rock Creek Park "both in the District of Columbia and as extended into Maryland [remain] a part of our national park system." Further, the NCPD oversight specified in the Capper-Cramton Act mandated a federal role in this context.³²⁰

Murray cited several hundred letters from all parts of the country—and one each from park associations in Japan and Belgium—protesting the Beltway leg through the

³¹⁸ Barry Mackintosh, Rock Creek Park: An Administrative History (Washington, DC: National Park Service, History Division, 1985), 85-86.

³¹⁹ Congressional Record, 101:1033; Beveridge, "Inter-County Belt Work."

³²⁰ Mackintosh, Rock Creek Park, 87; George Beveridge, "Butler Assails Senate Role in Belt Road Row," Evening Star, 25 February 1955: A-1; George Beveridge, "Belt Road Plan Probe Defended by Chairman," Evening Star, 26 February 1955: A-1.

park. Several individuals, including National Park Service Director Conrad Wirth and Major General U.S. Grant III, chairman of the American Planning and Civic Association, spoke against the negative effects of the highway. However, the two-day hearing before Murray's committee adjourned with sharp conflict remaining between Maryland officials and Murray whether Congress could intervene without Maryland's approval. That question was never resolved. Murray's bill did not come up for a vote in either house, and again was ignored after its reintroduction in the subsequent congressional session.³²¹

So two complementary questions remained unanswered: Could Congress order Maryland to take any action with respect to that state's portion of Rock Creek Park? And in turn, could Maryland take any action concerning the park without federal approval from either the NCPC or Congress? That Maryland officials remained confused years later is apparent from the wording of a 1958 proposal reviving a plan for U.S. 240 through the park:

Numerous studies have been made by various agencies for the construction of an expressway facility into the District of Columbia using principally lands now a part of Rock Creek Park. This report does not contain design details of this route, but there is little doubt that such a facility could be built within the broad expanse of Rock Creek Park possible on the extreme western side. The problem with which we are confronted in the use of any portion of Rock Creek Park for a longitudinal highway facility is the opposition to date of the National Capital Park Service as well as opposition from other groups devoted to parks, recreation and conservation. An Act of Congress might release the necessary lands for highway purposes.³²²

³²¹ Mackintosh, Rock Creek Park, 87; George Beveridge, "Belt Highway Inquiry Ends in Row on Rights," Evening Star, 27 February 1955: A-10. The issue of routing U.S. 240 through the park did resurface in Congress; see Congressional Record, 101:5992; 102:14945; and 104:19431.

³²² Maryland-National Capital Park and Planning Commission, Staff Report on Feasibility Studies, 7-8.

The conditional "might" in the last sentence indicated officials' perplexity over the rules governing Rock Creek Park. Who had the authority to enable whom to do what, in terms of building highways in any section of the park? A joint agreement, spelling out a consensus for respective responsibilities among regional, state, and federal authorities, would not occur until 1963.

Having received no further injunctions or congressional directives to the contrary, the Maryland State Roads Commission built the Rock Creek Park Beltway leg as a parkway, as per its plan approved by the National Capital Planning Commission. In effect, it was purposeful inaction which enabled the road's construction: neither the courts nor the Senate ruled explicitly that the controversial leg could be built, but more importantly, neither one declared that Maryland could not build it. How, then, did Maryland go about making a parkway out of a Beltway? And, considering the lack of visible parkway manifestations today, where did the parkway go?

In his administrative history of Rock Creek Park, Barry Mackintosh answers these questions succinctly: "Planning for the beltway leg in Maryland proceeded amid state assurances that it would be a low-speed 'parkway' from which commercial traffic would be forever barred--assurances that were forgotten when the beltway was completed in the mid-1960s and became part of the interstate highway system."³²³ That assessment is only partially accurate. Mackintosh's evaluation is equivocal in several respects: first, the assurances of parkway standards were not simply "forgotten"; second, he neglects to mention that the road was actually built as a parkway as promised; third,

³²³ Mackintosh, Rock Creek Park, 87.

he fails to note the full significance of Rock Creek valley residents' participation in the process.

It was this third factor which most profoundly shaped the ultimate form of the Beltway park leg. Of the two primary obstacles to the highway, the Capper-Cramton "parkway" challenge drew the public attention and brought the case to Congress and the courts. But the opposition from residents, in addition to initiating the question of the parkway's viability, played a greater role in the road's final design, and foreshadowed similar activist intervention in road-building projects nationwide which would follow within a few years.

Until the 1960s, engineers and planners regularly routed new highways through areas which would provide the least resistance. In practical terms, that often meant sites occupied by minorities or the poor, or riverfronts or stream valleys housing few residents or business owners to complain.³²⁴ Rock Creek Park occupied a stream valley, but it was a stream valley passing through a prosperous suburb of the nation's capital, whose residents included some of the most powerful politicians and journalists in the country. The NCPC was responsible for permitting the road to exist in the first place, by approving its construction as a parkway, but Rock Creek residents with political connections, in conjunction with engineers working for the state of Maryland or its hired firms, determined the actual serpentine route.

No one prime mover was responsible for the curves commonly called the "Roller Coaster." Rather, they were the cumulative result of repeated political interventions into what area engineers had previously considered a relatively apolitical

³²⁴ Lewis, Divided Highways, 241; Ellis, "Visions of Urban Freeways," 266-267.

process. Resident Esther Coopersmith, for example, used her ties as a prominent Democratic fundraiser to urge Governor Millard Tawes and state highway officials to reroute the parkway around certain trees. Gerald P. Nye, who coordinated the opposition efforts of several citizens' associations, was a former U.S. senator. At a Senate hearing on the parkway, Senator Russell B. Long, a Democrat from Louisiana, "told reporters . . . he 'was pressured by his wife' to oppose the park road because their home [was] near the Maryland section of the park. He added, laughingly, that he refused to do so and 'ran into real trouble.'" The wife of then-Minnesota Senator Hubert H. Humphrey may also have been involved in the protest effort.³²⁵

Rock Creek residents were well aware of the political dynamics, and watched as the route shifted time and again in response to their intervention. That is not to say that all residents were pleased by the outcome; after all, every turn the parkway took to avoid a specific tree or house brought the road closer to a different tree or house. Paul Foer, whose family lived within blocks of the parkway's route, recalled in 2000 the neighborhood gossip from when the road was constructed:

People would say . . . "I hate driving there," because you curve one way, you curve the next, you curve the other. . . . [My neighbor, an attorney with the Justice Department,] was railing on and on about why the beltway curved and curved way over toward us rather than took the short swath it should have taken down the other side of Rock Creek Park. And he swore it was because there were influential federal legislators. I don't know exactly who; you could say, those senators and congressmen. On our neck of the woods, I don't believe we had any senators and congressmen, right over in our area. But there were some living over there, according to him. And this was fairly common knowledge, that that's why the beltway curved the way it did.³²⁶

³²⁵ Feaver, "Washington's Main Drag"; Beveridge, "Butler Assails Senate Role"; interview with Neil J. Pedersen, 5 February 2001.

³²⁶ Interview with Paul Foer, 11 October 2000.

Before the road opened to drivers, the first beneficiaries of this political pressure were the engineers charged with designing the road. Sitting in their office on the second floor of the College Park shopping center, the Michael Baker, Jr. engineers fielded political requests to reroute the Rock Creek Park segment. Former Baker draftsman Isadore Parker observed "a lot of calls coming in to [Supervising Highway Engineer Jack H.] Frantz from members of Congress, or at least their offices, asking that certain houses be saved, that certain trees be saved. There seemed to be a lot of political influence there. And as a result, when you go through that portion of the beltway now, you do have a lot of curves." Parker repeatedly redrew his own designs for the road to accommodate the requests; the route was changed as frequently as four times in a single week as a direct result of the political pressure.³²⁷

Fred Pavay, in the Baker office alongside Parker, was not pleased by the politics or by the blame for poor road design which was (and often still is) directed at engineers. Pavay stressed that the parkway leg "was not an engineering design. The engineers designed it within certain parameters that were laid down for them, political parameters. . . . Some of the curves in that [section] were specifically, for political reasons, to take care of the environment before the environment was a buzzword." The Baker engineers created the park leg with a design speed of 60 miles per hour, compared to 70 miles per hour for most of the rest of the beltway in Maryland. Thus the "Roller Coaster" section only appears unsafe, according to its original engineers, because most drivers regularly exceed the safe speed of 60 miles per hour for which it was designed.³²⁸

³²⁷ Interview with Isadore Parker, 5 October 1998; interview with M. Slade Caltrider.

³²⁸ Interview with Fred Pavay, 8 October 1998; interview with M. Slade Caltrider.

As a result of these pressures and the restrictions imposed by the Crampton Act, when the contentious Rock Creek Park leg of the Beltway opened on October 24, 1957, it was in the form of a parkway with many curves, running 1.5 miles between Connecticut and Wisconsin Avenues. It is important to note that the road was distinctly a parkway. Truck travel was banned; only light vehicular traffic was permitted. Parker recalled that "there seemed to be an effort to maintain a parklike quality to the road. . . . So as a result, instead of steel guardrails, they were designed to have wooden guardrails. And there was also great care given to retaining trees and other kinds of structures that were parklike in nature." Construction crews working for the John H. Ensey Contracting Co. of Baltimore were instructed by the M-NCPPC to protect at least one hundred specific trees, using gravel fill and rock walls if needed.³²⁹

Despite the extensive efforts of Maryland planners and engineers to build this segment as a parkway, the road itself survived only six years. By the time the full 64-mile Beltway opened in 1964, the parkway was nowhere to be seen. The creation of the Interstate highway system spelled the end for the ambitious beltway-parkway at the same time that it provided federal funding to Maryland and Virginia to help make the entire Beltway a reality.

The parkway controversy had played out mostly between 1953 and 1955, when the planned Washington Circumferential Highway was not subject to stringent interstate standards. But after the road was absorbed into the interstate system authorized by the Federal-Aid Highway Act of 1956, Parker's "parklike structures" and the overall design

³²⁹ Interview with Isadore Parker; "Inter-County Parkway Link Gets Under Way," Evening Star, 11 July 1956: B-1; "First Section Dedicated of Circumference Road," Evening Star, 25 October 1957: A-25.

of the four-lane parkway rendered it noncompliant with interstate specifications. Maryland officials could have chosen to leave the parkway alone, but would have forfeited the federal aid which the state would otherwise have received for an interstate highway. The lure of federal funds won out, and the State Roads Commission elected to rebuild the parkway in 1963 to meet interstate standards.³³⁰

Here history repeated itself. Under the Capper-Cramton Act, the NCPC needed to give explicit permission for the state to rebuild the beltway within the Rock Creek Park (Maryland) boundaries. Because new construction was imminent, residents saw another opportunity to change the routing to avoid certain trees and houses. Park area residents formed the "Save the Trees Committee" to, in their words, spearhead "a fight to reroute this 7/10 of a mile stretch of the Beltway in a straighter line, not only to save the magnificent stand of old trees in the Park south of the Creek and reduce the adverse impact on [our] properties from the proposed winding route at the very edge of the Park, but also to achieve a shorter, straighter, and safer road." While the NCPC and M-NCPPC indicated some willingness to compromise on the new routing, the State Roads Commission stood firm and allowed only a "30 to 80 foot move northward over a few hundred yards."³³¹

The more serious obstacle was the matter of overlapping authority. For the reconstructed parkway to meet all pertinent requirements, the new plans needed

³³⁰ "Old Section of Beltway is Torn Up," Evening Star, 27 September 1963: B-10; Anne Christmas, "4 Mile Beltway Link is Opened Quietly," Evening Star, 15 November 1963: B-1.

³³¹ Memorandum, M.F. Donegan, Stephen Timke, Sharon Ralph, and Thomas Kessing, January 17, 1968, Project File 0255, Maryland--Capital Beltway--Rock Creek Park, National Capital Planning Commission, Washington, D.C. (hereinafter NCPC Project File 0255).

concurrent approval from the M-NCPPC, the NCPC, and the SRC. The NCPC had the most reason to be wary of new plans for the highway, because of its obligation to safeguard the park under the Capper-Cramton Act. For the NCPC to again grant approval, it would take a persuasive argument that such approval and the resulting construction would be in the park's better interest.

On September 12, 1963, officials for all three authorities signed a landmark agreement enabling reconstruction of the park leg and therefore the completion of the Beltway as a whole. Under the seven-condition document, the M-NCPPC conveyed approximately 80 acres of parkland to the State Roads Commission as a perpetual easement for the Beltway's right-of-way through Rock Creek Park (Maryland). In return, the State Roads Commission traded to the M-NCPPC, "as a replacement for the parkland used in construction of the Capital Beltway," approximately 38 acres of adjacent land. In addition, the State Roads Commission paid \$700,000 to the M-NCPPC, to be used for the acquisition of future stream valley parks in Montgomery County.³³²

For its part, the NCPC considered the trade adequately beneficial to the park system, and gave its approval for reconstruction. The ultimate form and route of the Rock Creek Park beltway leg, then, was enabled by this reasoning:

[T]he National Capital Planning Commission approves the proposed construction of the Capital Beltway, being a part of the Interstate Highway System, through the Rock Creek Stream Valley Park, Units Nos. 2 and 3, in recognition of the public need for completion of the Maryland segment of said Beltway at an early date; that any alternative of said Beltway through residential neighborhoods would result in the displacement of a large number of families at a great cost to the residents of the State of Maryland and the United States; that the proposed use of such park land in this instance should not be

³³² "Agreement," September 12, 1963, NCPC Project File 0255.

construed as a precedent for or endorsement of the use of other park lands in the National Capital Region for Interstate Highway purposes.³³³

Two weeks after the agreement was signed, construction crews authorized by the State Roads Commission dismantled the entire 1.5-mile leg between Connecticut and Wisconsin Avenues, the first Beltway segment opened to the public six years earlier. William Shook recalled that

we literally tore it up . . . that section was totally, was closed, the roadway torn up, bridges rebuilt. I remember Cedar Lane and so forth were just essentially torn out and reconstructed 'cause the alignment did change a little bit, and the grades and so forth. We also enlarged it from the original design, [which] was for a four-lane, two lanes in each direction. . . . [W]e built six lanes and then added the . . . seventh and eighth later. Which caused a redesign of the Beltway at the last minute, really. A lot of the Beltway had been designed prior to 1960. And then we had to last minute redesign a good bit of it, widen out bridges to accommodate the extra lanes, the future.³³⁴

Within a year, the rebuilt road reopened with three lanes in each direction. The only sign of the years of struggle over the parkway were the conspicuous curves.³³⁵

Later challenges to proposed expressways in the Washington area, including the Northeast and North Central Freeways (the portions of I-95 and I-270, respectively, in Maryland inside the Capital Beltway), at times resulted in cancellations of those projects. In contrast, since the Rock Creek Park leg of the Beltway was built in the end—twice—it is not cut and dry whether the local and national protests over the "Beltway-in-the-park" can be deemed successful. The answer depends on how a successful protest effort is defined, and who is making the definition. When the

³³³ Ibid.

³³⁴ Interview with William Shook, 1 February 1999.

³³⁵ Christmas, "4 Mile Beltway Link"; "Old Section of Beltway is Torn Up," Evening Star, 27 September 1963: B-10; interview with William Shook.

parkway was first put through in 1957, in fact, Rock Creek area residents for the most part considered the fight lost. Their neighborhoods, and the park itself, changed significantly as a result of the presence of the road.³³⁶

But for some engineers and political officials, the parkway episode represented an unprecedented capitulation on the part of the Bureau of Public Roads. Slade Caltrider, who worked with William Shook to supervise Beltway construction for the SRC, was astonished to see the federal authority (to which he refers by its later name) concede to public pressure:

[F]or the first time in my life I saw the Federal Highway Administration back off and take action based on somebody else's desire. . . . They were hard-headed, they don't give in too easy. But they danced a pretty tune. . . . And we were all amazed, that [residential opponents] could make the Federal Highway Administration dance. Because if we would have gone to the Federal Highway Administration and suggested they do what was done, they'd have told us, you're crazy, we won't participate. But what you see is what we've got.³³⁷

At that time (1953-55), long before U.S. Secretary of Transportation John Volpe cancelled New Orleans's Vieux Carre Riverfront Expressway in 1969 in what is generally considered one of the first major capitulations of federal officials to highway protesters, there was no widely known--or possibly any--precedent for even the limited federal action to which Caltrider reacted so strongly.³³⁸

³³⁶ Interview with Paul Foer.

³³⁷ Interview with M. Slade Caltrider.

³³⁸ For the New Orleans episode, see Richard O. Baumbach Jr. and William E. Borah, The Second Battle of New Orleans: A History of the Vieux Carre Riverfront-Expressway Controversy (University, AL: University of Alabama Press, 1981); Lewis, Divided Highways, 209, 216; and Jack E. Patterson, "Halting the Highway Men," Business Week, 19 July 1969: 37-38. For an example of a smaller federal highway project cancelled in response to concerted opposition, see Barry Mackintosh, "Shootout on the Old C. & O. Canal: The Great Parkway Controversy, 1950-1960," Maryland Historical Magazine 90 (Summer 1995): 140-163.

While Rock Creek Park may thus have set a precedent for federal intervention in state highway-building programs, ambiguities in the case left other legacies as well, which have proved germane to the future of that Beltway leg as well as to other highways in Maryland. For example, the 1963 agreement between the NCPC, M-NCPPC, and State Roads Commission did not in fact eliminate the potential for future expansion and development of highways within the park, as it seemed to do at first glance. State officials later recognized an opening for further construction on the Rock Creek Park leg, made possible by two contradictory clauses in the 1963 agreement:

- (2) The Capital Beltway through the park shall have a maximum of six lanes.
- (3) Wherever possible, existing roadways in the park shall not be relocated and additional lanes shall be constructed in the median.³³⁹

Which clause held precedence? If (2), the beltway's form in the park was set in stone, or at least concrete. But if (3), additional lanes could feasibly be added, and the road could conceivably even be relocated. In 1976, Maryland's assistant attorney general, in consultation with lawyers for the NCPC and M-NCPPC, decided that (3) was the ruling clause. The phrase "additional lanes shall be constructed in the median," Nolan H. Rogers wrote, "indicates to us that the intention of the parties to the September 12, 1963 agreement was to permit the addition of new lanes in the median, as is now being considered." Rogers's interpretation enabled the eventual expansion, within the pre-existing rights-of-way, of the park's beltway leg from six lanes to eight.³⁴⁰

³³⁹ Unknown to Charles H. Conrad and George H.F. Oberlander, 23 July 1976, NCPC Project File 0255. The file contains only the carbon copy of the first page of the letter; the remainder, including the author's signature, is missing.

³⁴⁰ Nolan H. Rogers to M. Slade Caltrider, 10 August 1976, NCPC Project File 0255.

That decision once again raised concern among Rock Creek area residents that future expansion would always lurk as a possibility. In 1996, a group of residents formed the Rock Creek Coalition in response to the Maryland Department of Transportation's Capital Beltway Corridor Transportation Study, an extensive project to improve traffic conditions and discussed in the next chapter. While focusing generally on "the effect the Capital Beltway has on neighborhoods and the ecosystem in Montgomery County," the Coalition in the late 1990s was most concerned about the potential for widening the beltway, which for this particular leg "is tantamount to paving over parts of Rock Creek."³⁴¹ Both the 1963 agreement and Rogers's 1976 interpretation apparently constrain the beltway within the park to its current right-of-way, but the Rogers interpretation in and of itself suggests that there is room to maneuver within the agreement.

Underlying each successive protest concerning the Rock Creek Park leg, from 1952 to 1996, was concern for the environmental impact of the proposed road. Well before "environment" became a buzzword in a planning context, the citizens' associations and congressional leaders arguing against the parkway in the 1950s used primarily what would now be called environmental arguments to protest the road's construction. At a time when highway planners routed and built their roads almost at will, it is remarkable how close the parkway protesters came to winning a legal victory which would have at least seriously hampered completion of the Beltway, if it had not stopped the circumferential altogether. Timothy Davis writes that the highway officials'

³⁴¹ Rock Creek Coalition, "Fourteen Miles Long and One-Tenth of a Mile Wide," [1997] document in possession of the author.

casting of the Beltway segment as a parkway "fooled nobody and only served to further cloud the difference between parkways and ordinary expressways, helping to turn environmentalist sentiments against both forms of development."³⁴² But the first part of his argument cannot be right: if the Beltway-as-parkway gambit had failed, the road would not have survived its challenges in the courts and in Congress. Federal authorities may have chosen to be "fooled," in Davis's words, by this strategy, but they accepted it nonetheless.

Using the stipulations of the Capper-Cramton Act as support, parkway opponents forced planning and political officials to pay serious attention to environmental considerations with respect to at least a portion of the Beltway. However, another, overlapping group of Beltway opponents found no such platform through which to get officials to recognize their concerns. Residents who lived near the highway found themselves displaced from virtually all phases of the road's life, from planning to construction to routine operation. If the Beltway was a godsend to the commuters quoted in the previous chapter, it was a living hell to its neighbors who found their concerns to be of little interest to the authorities who had the power to make the situation otherwise.

Living by the Beltway

In 1920, Neal Potter and his parents and siblings moved to a farm along the C & O Canal in rural Cabin John. The land was rocky and in poor shape, but by 1940 the

³⁴² Davis, "Mount Vernon Memorial Highway," 848.

Potters had rebuilt the farm structures and added sewer, telephone, and electrical lines. All members of the family worked in the fields and the dairy; Neal ran a daily milk route and helped found the Farm Women's Market in Bethesda in 1932 to provide income from the farm's garden products and from baking. The canal was still running when the family moved to the farm in 1920, and Neal grew up watching boats passing through the three locks adjacent to his farm and chatting with the lockkeepers.³⁴³

In 1958, an official from the National Park Service visited to present the Potters with a 12-page mimeographed document which in fine print outlined the planned route for the George Washington Memorial Parkway. The parkway was routed near their farm and would require several acres; the family was on notice that at some point the federal government would likely purchase a piece of their land for that purpose. So it was a shock a year later when, as Neal Potter recalls,

a State Roads Commission agent came by and told my mother, and she was alone in the house at the time, that they were going to take the farm in 30 days [for the Beltway]. . . . Well, after 40 years of struggling with that place and beautifying it with all kinds of flowers and gardens, as well as the vegetables and such, Mother just strangled at the thought; she couldn't catch her breath. They took her to the hospital and they kept her for three days to sort of recover from the breathing problems created by the thought. . . . She wrote, I think, the only letter to the editor she ever wrote, after she recovered, saying that sometimes highways kill people before they are driven on. And that was probably the case with her.

At the time and in the years to follow, Neal Potter was not upset by the development of the Beltway in and of itself. What frustrated him was the SRC's tendency to ignore the effects of the way it handled the situation. For one, the surprise

³⁴³ My discussion of the Potter family draws on Neal Potter to Jeremy Korr, 10 March 1999; "Building the Beltway: The Montgomery Experience," oral history panel, 24 October 1999; and interview transcripts from Barbara Greenbaum, producer, "Paths to the Present: Montgomery County Stories," program #9, television documentary produced 26 February 2001 for Montgomery County Cable.

notice was inappropriate: "To say you want it in 30 days is just too much to take," Potter recalled. Also, the SRC had without notice changed the Beltway's alignment from an earlier master plan which sent the highway to the east of the Potter farm through wooded and unoccupied areas; no arguments based on the impact to the farm and its residents could convince the engineers to consider returning to the earlier routing. Thirdly, the SRC ignored not only the working farm and its residents but also the structures in the Beltway's path, including at least one well-preserved canal lock house which still served as a working residence; with no historic preservation movement in effect at the time, the lock house was demolished during the Beltway's construction.³⁴⁴ Potter's anger at the callousness of the planning process inspired him toward a political career; in his later years on the Montgomery County Citizens Planning Association and Montgomery County Council, and during his term as county executive, he supported reforms to make planning processes more responsive to the concerns of individuals and of the environment.

SRC officials were not exceptionally impolite to Potter's family; the commission followed standard procedure in giving the landowners 30 days' notice to vacate, and in fact it took two years before the SRC fully took over its portion of the Potters' farm.

Businesses and other residents faced the same constricted timetable. Near the Colesville

³⁴⁴ In contrast to the SRC, the National Park Service showed stronger concern toward building roads in the C & O Canal area. The NPS opposed the Cabin John Parkway, a link between the Beltway and the George Washington Memorial Parkway, as "ruinous to the long-treasured scenery of the quiet stream valley." But SRC and M-NCPPC officials insisted the Cabin John Parkway would be an essential commuter link and in fact would showcase the valley's historic and natural features. The NPS acquiesced, and the Cabin John Parkway was built; in the process, a canal lock house and an African American cemetery (Mount Glory) were demolished. See Davis, "Mount Vernon Memorial Highway," 879-880.

Road (U.S. 29) interchange, a shopping center and 53 houses were condemned for the Beltway; the SRC took ownership of all of them between 1955 and 1959 and leased them to tenants on terms which provided for mandatory abandonment on 30 days' notice. But few of the tenants believed the state would actually give them such short turn-around time. When on October 6, 1959, the SRC told 30 house tenants and the Fairway Shopping Center merchants to vacate by November 6 after which demolition would begin, the shopkeepers felt "consternation," in the words of a local newspaper. Walter Moyer, a pharmacist at the Fairview Drug Store, said that "SRC officials earlier led him and other merchants to believe that at the earliest they would have to evacuate by the beginning of next year." SRC officials insisted they had stressed the 30-day termination clauses, but the technical truth did not make the merchants feel that the SRC respected their needs.³⁴⁵

From a different perspective, the Fairway retailers and the previous owners of the 53 condemned homes were the lucky ones. Because their buildings stood directly in the Beltway's path, the state compensated them for their property and enabled them to move elsewhere. Those living near the alignment, though, were not so fortunate. These neighbors became what today might be called collateral damage resulting from the Beltway's construction, for several reasons. Foremost among them was the ever-present noise: once the Beltway opened, the soundscape near it changed forever. Among the many letters of praise commuters sent to newspapers in the Beltway's first weeks, this critique from Joan L. Donegan of Chevy Chase stands out:

Far beyond the cost to me as a taxpayer of this convenient (as distinguished

³⁴⁵ "Road Work to Demolish Shop Center, 53 Homes," Suburban Record, 22 October 1959: 1.

from necessary) road is the cost to me and all other homeowners whose properties border on this beltway. I and hundreds of other adjoining homeowners were hit on the opening of the beltway with "noise blight," the extent or even the existence of which, judging from these [overwhelmingly positive newspaper] articles, was simply not worth mentioning.

No one who does not live next to this road can possibly imagine the amount of noise issuing from this six-lane high speed truck and automobile highway—the constant din that permeates our yards and houses even with all windows shut. It disturbs our conversations, our sleep and ordinary enjoyment of life.³⁴⁶

This effect of the new road was permanent. Fifteen years later, another angry resident wrote that "[t]o those of us who live adjacent to the Beltway the most noticeable problem is noise. We cannot ever open the windows at night. We must resort to air conditioning."³⁴⁷ Highway officials in both states eventually tried to mitigate the noise problem by using sound walls—formally, sound attenuation barriers—but these brought problems of their own, as described later in this chapter and in Chapter 7.

In addition to bringing unwanted sound, the Beltway also disrupted community life in the areas it passed through which had been previously developed. Besides Cabin John, the road also cut across the Silver Spring neighborhoods of Hillandale and Oakview just inside Montgomery County around the New Hampshire Avenue (Route 650) interchange (Fig. 2). Charles Mercogliano, who grew up close by, remembered that "[o]ne thing that did affect us was our ability to walk to the shopping center in Hillandale. We had to go to 650 once the beltway was completed instead of just walking through the field [which was used for the Beltway]. The completed beltway effectively

³⁴⁶ Joan L. Donegan, letter to the editor, Evening Star, 30 August 1964: B-1.

³⁴⁷ Murray H. Schefer, letter to the editor, Washington Post, 25 June 1979: A18.

isolated our neighborhood, too."³⁴⁸ James Landolt, who lived in Oakview, recalled that the Beltway created a barrier both physical—cutting off the woods route which children from Oakview and Hillandale used to visit and play with each other—and cognitive:

But I think the real impact on Oakview was psychological. It was already becoming demographically isolated from the rest of Montgomery County by the end of the 1950s. It was seen as a place to "get started" and then move on to something better in another part of the County. Although in the 1960s Oakview probably had a much higher average income than the US as a whole, because Montgomery County had by that time become the wealthiest in the country, we could not shake the feeling that Oakview was sort of a poor relative and got the short end of the stick when it came to county services. When the Beltway was built it became "the other side of the tracks" and exacerbated the problem. It was considered to have more in common with Prince George's County than with Montgomery.³⁴⁹

The Beltway separated neighborhoods in lesser-developed Prince George's County as it did in Montgomery. Greenbelt, as noted earlier, was a carefully planned community originally designed in the 1930s, but those careful plans did not envision the 1948 Baltimore-Washington Parkway nor the 1964 Beltway. "These two highways," historian Cathy Dee Knepper writes,

formed immense barriers between original Greenbelt and later housing areas. If the homes had existed first and relationships had been formed before the barriers were put in place, it might have been possible to keep connections with these outer areas. As it occurred, with the barriers first and newer neighborhoods later, it became almost impossible to form a cohesive Greenbelt.³⁵⁰

In some cases the Beltway disrupted communities simply by existing; the traffic drawn to the highway clogged the local roads used to access it and made it difficult for local

³⁴⁸ Beltway Survey #491.

³⁴⁹ James Landolt, email to Jeremy Korr, 17 December 2000; interview with James Landolt, 20 December 2000.

³⁵⁰ Knepper, 153.

residents even to leave their homes. Hillandale resident Kathy McAdams writes of "the certain tension involved in going anywhere, because when the Beltway clogs, so does everything in our area. School buses can't run, church can't happen . . . it's like living on the frontier when the cows stampede. Woe unto whatever is in (or near) their pathway!"³⁵¹ Meredith Anderson, living in Beltsville near the U.S. 1 interchange, similarly finds that congestion there "is often tied directly to the Beltway. A drive that may take 90 seconds during one part of the day can take 15 minutes or more during rush hour. It's frustrating to feel that I'm trapped in my house because of a Beltway traffic jam."³⁵² In these scenarios, as in Potter's case, residents' frustrations are directed both at the Beltway's effects themselves and at the sense that planning and political officials are oblivious to the quality-of-life sacrifices residents are making in living with those effects.

In the worst cases, all of these negative impacts and more coincide for certain residents, who live literally in the shadow of the Beltway. For these individuals, the Beltway means much more than it does to the tens of thousands who drive on it daily; it affects every minute of their lives at home. For Lisa Loflin and her father Isidore Elrich, who have lived immediately adjacent to the Beltway in Silver Spring, a few blocks west of the Georgia Avenue interchange, since before the highway's construction, the Capital Beltway has been a nightmare for 40 years. In conversations with me, Loflin and Elrich detailed a catalogue of concerns about the Beltway's effects on their lives. Yet even with that laundry list in mind, they remain most upset, like Neal Potter, not with the

³⁵¹ Beltway Survey #34.

³⁵² Beltway Survey #309.

Beltway itself but with the way state authorities have handled its construction and maintenance, with what they perceive as a marked lack of respect for its many effects on their lives. Both Loflin and Paul Foer, who grew up in Kensington near the future route of the Beltway, described in detail to me the effect the Beltway's construction and traffic have had on their lives. In Loflin's case, we talked in her family house with the sound of the Beltway constant in the background, coming from the back yard; we sat in the living room cluttered with bed sheets from the sofa where her father has slept since moving out of his bedroom, where the noise from the Beltway a few dozen yards away kept him awake at night for years.³⁵³

As children, Loflin and Foer loved the woods surrounding their houses. In the header to this chapter, Loflin describes her memories of her sylvan playground. Foer, too, recalled going into the woods frequently with his friends and siblings to play and explore. Even after the Beltway was built, Foer and his friends would ascend a steep hill overlooking the Roller Coaster section and fly out over the highway on a rope swing tied to a tree. But the wooded area closest to his house, in part a portion of Rock Creek Park (Maryland), was a central focus of his childhood years, and then suddenly disappeared:

I think this is probably the most poignant part of my recollection of the story here. . . . We used to play in Rock Creek Park all the time. . . . And there was a big huge boulder there, I guess it was granite, and it was called, at least to us, it was Indian Rock. And I tell you, this rock was amazing! . . . And I remember being just big enough that I could actually climb up a lot of it myself and thinking what a great accomplishment that was. I'm going to guess that this boulder was actually twenty feet high, that's how big it was. It would dwarf a

³⁵³ My discussion of Loflin and Elrich draws on a joint interview with them on 23 January 2001, on Beltway Survey #542, and on email correspondence and phone conversations before and after the joint interview. Citations for Foer are from interview with Paul Foer, 11 October 2000.

person. . . .

But we'd play there and we'd picnic there. And I don't know exactly when it would have been, but just before the Beltway was coming right through there, my mother told me that Indian Rock was going to be blown up. And I was just, I was, I was bewildered by this whole—how could they blow up Indian Rock? Can't they just go around it? Can't they leave it? Can't they move it? We'll never get to climb up Indian Rock again! Can't we do anything about it? And my mother would say, you can't fight City Hall.

And I just remember going there for one last time with my mother and my brother, and having a picnic and thinking that was going to be the last time we'd climb up on it. And it was gone! . . . I loved the landscape, and I loved that rock. And that whole idea of that rock . . . that was my Rock of Gibraltar, and it was gone.³⁵⁴

From their standpoint as children, the Beltway's construction did more than take away Foer's and Loflin's playgrounds; it razed the world around them in which they were comfortable. The terms they use indicate how deeply the feelings remain with them as adults. Loflin's first memory of the Beltway "is from its initial building phase. I was about 6 years old. I came home one afternoon and the trees in the back yard were all down, and my doll carriage was under one of them. It was very traumatic for a small child." Foer recalled how powerful the loss of the woods was:

[S]ome of my very, very earliest memories—of course, you're talking about age four—was when the Beltway was built. And I can vaguely remember seeing this huge scorched earth as wide as a football field in what had been very, very thick woods. The woods were always very important to us, very close to us, and we had played in there and explored . . . it affected everything about our lives.

³⁵⁴ Indian Rock, an Evening Star reporter wrote in 1963, had been "a meeting place, picnic spot and smooching mecca . . . for generations of county residents." Members of the Forest Glen Civic Association and Rock Creek Hills Citizens Association asked the SRC to save or move it, but state engineers rejected the appeal because the rock stood in the center of the Beltway's alignment and was deeply submerged in the ground, making it difficult to move. Indian Rock sat alongside Rock Creek next to Stonybrook Road about two miles north of East-West Highway. See Anne Christmas, "Montgomery Beltway Dooms 'Indian Rock,'" Evening Star, 13 October 1963: A-1.

If the Beltway had inflicted only painful early childhood memories, Loflin's and her family's frustrations would likely not have run nearly so deep. But the loss of the woods, for them, was the least of many worries.

First, when the Elrich family shopped for their house in early 1960, their real estate agent skirted the requirement to disclose plans for the Beltway, instead lying (in Isidore Elrich's words) by telling them that a small road would be coming through on the far side of the creek in the back yard. The road, the agent said, would be similar to nearby two-lane Forest Glen Road. The Elriches saw no reason to pass up the house for that reason, because "that you could deal with," Loflin explained. "A little Forest Glen, who cares. Forest Glen is kind of a nice street." The Elriches were not alone in falling victim to dishonest agents. William Shook remembered that the State Roads Commission listened to considerable "fallout" from

[p]eople suddenly losing the wooded area behind their houses and claiming they were told that was going to be a park in the right of way, and apparently the builders stretched the truth considerably when the people bought these houses in the right of way, which had been set aside from at least the mid-'50s. And they weren't always told the truth, the buyers of the subdivisions alongside of the Beltway weren't always told the truth about what was going in this wooded, undeveloped area.³⁵⁵

Since no highways like the Beltway had been put through Maryland's suburban subdivisions before, the Elriches had no reason to doubt the agent's forecast.

Second, the noise from the Beltway forced the family to radically change their lifestyle. Socializing in the front or back yard became impossible; even opening the windows made conversation difficult. "This is constant," Loflin said as we listened together to the traffic through closed windows. "When the trucks go by, you get the

³⁵⁵ Interview with William Shook.

windows rattling. I was on the phone . . . with a friend, and somebody went by with their CB, and she goes, what the hell is that? I said, well, it's just somebody on the Beltway." In the mid-1970s, the Elriches persuaded highway officials to take decibel readings on their property; during non-rush hour, the state measured 90 decibels in the back yard and 85 in Isidore's bedroom with the windows shut.

Ten years after the Beltway opened, state highway officials finally agreed to install sound barriers, but this only made the Elriches angrier because of how it was handled. The family hosted a neighborhood meeting in which SHA representatives showed samples of a thick, sound-absorbing wall which they planned to install; the actual wall constructed turned out to be much thinner and less durable. Loflin recalled bitterly:

God, they were so wonderful when they sat in here, with a roomful of people. And they had slides, samples. Oh, they were in their wonderful suits and they were just so nice. And they were, "Oh, we really care," and "Oh yes, we understand that this is very loud, but we're going to take care of you." They were so—and then they came in they put up this cheesy, crummy—you could go through that damn wall with a butter knife. And it just crumbled. I mean, it started crumbling within a year. It was years before they replaced it.

With the Beltway's noise, both before and after the sound barriers, the Elriches found themselves constrained within their house, with the windows closed, and even then could not drown out the sound.

Third, accidents on the Beltway repeatedly interrupted the family's private life. Loflin regularly woke up at night after hearing a crash from behind the back yard, got up and went to the kitchen, and called the police "before the people got out of their cars." Years of this experience took a psychic toll, Loflin described:

I hate, I hate all the memories. I'd had nightmares as a kid of accidents. I still have them. They interrupt—they go into my dreams. I mean, I'm spinning out

of control. I will wake up in a cold sweat and then I'll hear the sirens go by or stop back there for an accident. I don't like that. It's not fair.

Paul Foer, too, recalled "very clearly" having nightmares stemming from the Beltway not far from his bedroom window. Like Loflin,

Numerous times I was awoken by crashes. Severe, horrible crashes. You'd hear screeches and squealing, and then this huge impact, glass shattering and of course sirens and all a little bit later. And being awoken from that and the fear and the scare of that. On at least one occasion I very clearly remember going down through the woods and to the edge of the Beltway, to the guardrail almost, with . . . both my older brothers, and seeing the glass and bloody bandages and wrappers and bandages thrown about, and seeing where this had been this horrible crash where probably someone died.

But it was not just the accidents themselves which invaded the Elriches' daily life.

Because theirs was the first in a row of houses with stairs into the back yard, ordinary drivers as well as the victims of accidents found their place—separated from the highway only by a guardrail—convenient to use as a telephone booth. Some people stopped on the Beltway and walked up to ask for directions. Others, involved in accidents, would "come trucking up the back steps, knock-knock-knock. Yeah [I'd say], we've already called the police and the ambulance. And I remember people sitting in here and getting washcloths, and cleaning them up because they're covered with blood. And you've got to understand, I was a little kid," Loflin remembered. The Elriches received no compensation for regularly providing this service.

Fourth, pollution from the Beltway damaged both the Elriches' yard and—they believe—their health. "When you look at the house," Loflin said, "you can see what it's doing to your lungs." Soot particles coated the side of the house and anything planted in the back yard, where the family used to grow fruits and vegetables. But even without the soot, the back yard became untenable for a garden:

[W]e had beautiful soil back there because of the woods. Well, the fill they used, it's rocky, and most of it's gravel with a little dirt mixed in. Most plants don't like that, at all. So even if you're willing to try to grow something, nothing wants to live. And like I said, the Beltway brought rats. We still try, but it's not worth it. It's just not worth it. And it's painful to go outside.

Beyond the soot, gravel, and rats, the sound wall eventually installed brought with it shade; it did not block the fumes and particulate matter from the Beltway, but did stop the sun from shining into the back yard. In response to these factors, the family shifted its garden to the front yard, where it disturbs neighbors, and kept their windows shut to close out the vehicular emissions as well as the noise.

Fifth, the Beltway led directly to an increase in crime along the Elriches' block. The highway provided a perfect setup for robberies: "You'd park," Loflin explained, "pull up a truck behind the houses, and put on your flashers like there's something wrong, and leave the truck there. . . . Nobody can see what's happening this side of it, from the Beltway. You just walk into someone's back yard, break in at ground level at the back door." The Beltway drowned out the sound, even within the house, and then provided "the perfect getaway" with no stop signs or traffic lights. The Elriches were robbed at least twice, but

one of the robberies, there were three of us at home! Upstairs. Mom, my brother Josh, and I . . . were upstairs in the bedroom. . . . And I thought I'd heard something, and I started heading down the stairs, and for some reason my mother said . . . "Get back up here!" "Mom, I thought I heard something." "Get upstairs!" And I was right, I heard something. They were just loading band equipment out of the basement, guitars, amplifiers. . . . Just like that. And what they had done, they would take the glass in the back window, gone smash, and that way the glass didn't hit the floor. Load the truck, take off, and nobody knows anything.

After that robbery, Elrich's wife "never felt safe living here again," Loflin recalled.

"That's a horrible way to live. You know, you're terrified all the time. Because you are a

victim. And we really did become victims here. And nobody thought about that. Nobody cared." Increased crime as a result of the Beltway affected others as well; a Maryland judge who in 1964 convicted a Washington resident of burglary in Prince George's County "complained that the new highway allowed criminals to range over a wider area and to flee quickly."³⁵⁶

Sixth, the Beltway acted as a physical barrier and changed the dynamics of the Elriches' community in Forest Glen, as it did in Hillandale and Oakview. Children from their neighborhood had gone to school and played with friends on the other side of the woods behind their house, and moved easily back and forth by walking through the woods. After the Beltway's construction, walking to school or visiting those friends entailed a long walk several blocks to busy Georgia Avenue, then down Georgia across four Beltway entrance and exit ramps, and finally a few more blocks down neighborhood streets. For some time, residents tried to maintain their routines of moving around the community as they had before the Beltway, but with tragic consequences. Loflin recalled that "in the early days before there were the fences, people would try to run across the Beltway. 'Cause they still wanted their shortcut. People got hit. I remember the dogs in the neighborhood that got hit. Real early." As a result, residents changed their daily routines and no longer maintained the same social connections with the community now separated across six lanes of pavement.

³⁵⁶ Van Dyne, "Getting There," 203. In an interview with me, Greenbelt police officer *Ethan Gould similarly noted that his city's retail clusters "had a really bad problem with shoplifting" by thieves who sped to the nearby Beltway, which served as a "quick escape route." Interview with *Ethan Gould, February 2, 2001.

Seventh, as a result of all the previous factors, the value of the Elriches' house plummeted. With the woods truncated and the Beltway in the back yard, their property and others on their side of the street devalued quickly, so that by the time they realized how bad the situation was, they could not sell their house for enough to move elsewhere. In 1960 or 1961, the State Roads Commission gave the family a one-time payment of \$900 for the taking of part of their back yard for the Beltway's right-of-way. But aside from the ineffective sound wall, that was all the compensation the family received despite all the negative fallout they experienced as a result of the highway's construction in their back yard. While Isidore Elrich remains most upset by the state's failure to provide sufficient sound attenuation, Loflin is most bitter that the SRC did not save the family forty years of frustration and anger by simply buying their property; the state, in other words, should have showed concern not just for those few residents directly in the path's alignment, but for the many others who would have to live with it. "I'll be perfectly honest," Loflin said.

I know that they could not afford, they couldn't afford to sell the house and move. But we would have been much happier, all the way around, if those bastards had bought our house. ["Did they even offer?" I asked. "No," she answered.] . . . If they had been willing to buy us out at a reasonable price so we could have moved, I mean, that would have been magnificent. My mother grew up on a farm. So moving here, to what this originally was, this [was] her dream. She had her gardens, the woods, everything she always wanted. And it didn't last. Like I said, she wished they had taken this house.

Instead, Loflin's and her family's life changed drastically and permanently. "They took away everything," she summarized. "This was a nice place." Foer similarly looked back on "the profound impact of the Beltway coming through my world and blowing up my rock," with the repeated term "my" signifying how powerfully the Beltway affected him personally.

With all they experienced, Loflin and Foer both emphasized to me that their primary arguments are not with the concept of road building or with the existence of the Beltway—or even with the Beltway running through or near their back yards. Loflin recognized that the engineers who sent the highway through her woods were trying to do the best job they could based on what they had been taught:

I don't blame the engineers. I don't. But the planners. It's just, you have to have some kind of vision. If you look at the Disney cartoons from the '60s, there's a Goofy cartoon about him on the highway, and showing more and more and more cars will be coming. All you needed to do was look at the stupid cartoon, and you'd know that what they originally envisioned wasn't gonna do it. You had to have better planning. You have to.

In their conversations with me, Loflin, Foer, and Neal Potter all supported the Beltway and the access it has provided for area travel. What angered them was how Maryland developed the Beltway, how in so many ways the people creating and supervising the Beltway considered its effects on them and on other neighbors to be negligible beyond the consideration of intermittent sound barriers. "It's like they didn't care about the people," Loflin said.

In Potter's case, further advance notice (and more sympathetic delivery of that notice) of his farm's condemnation, and willingness by the SRC to discuss why it had shifted the Beltway's alignment to run through the farm, could have gone a long way toward easing the family's sadness and anger over losing much of their property. For Foer, if the SRC had more carefully considered what certain elements of the park represented to the people who used it, perhaps Indian Rock could have been moved to a different area of the park and remained a meeting place and touchstone for Foer and his friends. Some of the anxiety and nightmares Foer and Loflin experienced might have been mitigated if state representatives had met with them and their neighbors, before the

Beltway was opened, to thank them in advance for their patience and sacrifice in helping accident victims and to offer instructions for how to deal with the pollution and crime that might be coming. In each case, by remaining silent when they could have done otherwise, the SRC and other planning and highway authorities sent the message to the Beltway's neighbors that they did not matter. It was their process of creating and running the Beltway, not the Beltway's existence itself, which so frustrated the abutters.³⁵⁷

That process was not limited to Maryland's State Roads Commission; at the time, that was how the transportation planning process worked. Further, the people living near the Beltway seemed not to matter because, in the original framework for freeways dating back to 1930 which still more or less held, they really did not matter. In his introduction of the term "freeway," Edward Bassett specifically "defined freeway as 'a strip of land dedicated to movement' over which abutters had no right of light, air or access."³⁵⁸ Ethical or not, Bassett's conception of freeways prioritized the interest of the drivers, not the abutters, and highway officials followed suit.

Similarly, the SRC procedures of the 1950s were entirely consistent with those of other states across the country. Especially after the creation of the Interstate Highway System, state highway departments tried to build their hundreds of miles of new highway as efficiently as possible, which meant following standardized routines and not

³⁵⁷ In a major policy shift, officials in Montgomery County, where Potter and Loflin live, decades later instituted a rustic roads preservation program to safeguard the rural character of just the type of road and adjacent property that Potter lost. See Constance A. Terry, "Preserving a Cultural Landscape: The Rustic Roads Program in Montgomery County, Maryland," M.A. thesis, University of Maryland, College Park, 2001.

³⁵⁸ Davis, "Rock Creek and Potomac Parkway," 229, note 160.

worrying about the individual circumstances of every piece of highway. "Asked to build an enormous network of highways in a short time," Clifford Ellis writes, "engineers sought to standardize the production of highway mileage, not convert it into an unwieldy urban design project requiring careful molding of each urban segment to fit local needs."³⁵⁹

Neal Potter, Paul Foer, and the Elrich family thus were not singled out for impersonal treatment; the planning process itself had no place for their concerns. While their stories represent very specific cases, my written and oral sources corroborate a discontented constituency with concerns similar to theirs. Letters to the editor of local newspapers after the Beltway's opening, brief mention of residents' unhappiness in some newspaper coverage, the contentious and now-forgotten 1959 public hearing in Maryland, and responses to my Web survey all indicate that a significant contingent of people living near the Beltway had similar concerns to those of the individuals I have focused on here.

Such issues went beyond Montgomery County. Greenbelt resident Frieda G. Bell, for instance, sued the SRC in 1964, claiming that Maryland had not given her just compensation for her land taken for Beltway construction. Less than a week before the grand opening, Prince George's Circuit Court Judge Ernest A. Loveless threatened to issue an injunction prohibiting use of the affected segment of the Beltway unless the SRC resolved Bell's claim, which the commission apparently did.³⁶⁰ However, the size

³⁵⁹ Cliff Ellis, "Professional Conflict Over Urban Form," 273.

³⁶⁰ Clare Crawford, "Will Md. Widow's Claim Shut Down Beltway?" Washington Daily News, 13 August 1964: 5. I thank Clare Crawford-Mason for bringing this episode to my attention.

of the contingent of concerned residents is hard to determine because their voices have been largely absent from the documentary record, in part because major media outlets had a vested interest in portraying the Beltway in a positive light, which I will explain further in Chapter 9. But the concern did exist, as it did for other urban and suburban highways in the Washington area and beyond.

In the late 1950s and through the 1960s, protests erupted around the country over freeways designed to run through areas often more densely developed or more environmentally sensitive than the Capital Beltway. The public hearings mandated by the Federal-Aid Highway Act of 1956 gave little opportunity for the public to voice concerns because, as in the Cabin John case, highway officials generally designed their plans before the hearings and left no chance for residents to contribute effectively to meaningful decisions. In 1969, the federal government put into effect two policies intended to address directly the concerns of citizen participation and environmental sensitivity in the transportation planning process.

The first of these was the Federal Highway Administration's "Public Hearings and Location Approval" guidelines, revised in early 1969. The FHWA replaced the single public hearing occurring late in the planning process with two hearings: a "corridor public hearing," to be held before highway departments made their route location decisions, and a "highway design public hearing," to emphasize the specific location and design elements of the road. Later that year, the FHWA amended the guidelines yet again to mandate "citizen participation in all phases of the planning process, from the setting of goals to the analysis of alternatives." No longer would

highway officials be permitted to make their key decisions in advance and without consideration of residents' concerns.³⁶¹

In the same year, Congress passed the National Environmental Policy Act (NEPA), which instituted a national policy of minimizing damage to the natural environment. Under NEPA, federal agencies were mandated to follow systematic procedures for any planning which affected the environment. Federal projects which would have significant influence on the environment now required environmental impact statements (EIS) which would address environmental impacts, unavoidable impacts, alternatives to the projects, and other analyses.³⁶² Former SRC engineer William Shook recalled in 1999 how Maryland used to approach the natural world during the Beltway's transportation planning:

I have to admit, in those days, back in the '50s and '60s, we had very little concern for environmental impact. It was not, in those days, an issue. In fact, it was quite common to design highways down stream valleys because they were considered as not very important economically. Most of them could not be developed very well, and that was a common thing in those days, common thinking. And of course we've come 180 degrees from that now, and rightfully so.³⁶³

With NEPA, planners could no longer ignore the environmental effects of the roads they proposed. Former SRC engineer and state highway administrator Slade Caltrider remembered that when NEPA came into play, "the whole character of building highways changed. For the first time the highway builder had to [follow] rules. It was

³⁶¹ Edward Weiner, Urban Transportation Planning in the United States: An Historical Overview, revised ed. (Westport, Conn.: Praeger, 1999), 61-62.

³⁶² *Ibid.*, 62.

³⁶³ "Building the Beltway: The Montgomery Experience."

very difficult for highway people to accept some of these things. They liked clean air, and clean water, and clean everything else, but it was a whole new world."³⁶⁴

In theory, the two 1969 policies should have accounted for the types of concerns which had gone unanswered in the cases of the disappearing parkway (primarily environmental issues) and of the Beltway's abutters and neighbors (primarily social). Neither category of concern had a meaningful place in the transportation planning process during the Beltway's construction; both were integrated as key components from 1969 onward. In later planning relating to the Beltway, then, those concerns would likely have been addressed much more substantively than during the Beltway's development. Were they?

The most extensive planning for the Beltway since its original design and construction has come in both Maryland and Virginia in processes, beginning in the mid-1990s and running past the last year of this study (2001), aimed at mitigating poor traffic conditions on the overcrowded highway. Virginia's Capital Beltway Study and Maryland's Capital Beltway Corridor Transportation Study both began some 25 years after the two 1969 policies took effect. In the next chapter, I examine both studies and evaluate to what extent highway officials and the public feel that—in contrast to the 1950s—residents play a meaningful role in the process of determining the Beltway's future and officials seriously consider the environmental impact of alterations to the Beltway. In the process, I look at how far both states have coordinated their efforts, in possible contrast to the original development when the Beltway was essentially designed and built as two separate roads. Forty years after the Beltway opened, is the

³⁶⁴ Interview with Slade Caltrider.

power to change its design and function still vested almost entirely in official bodies;
does the public have increased access to the planning process and the Beltway's future?
Part of the answer is suggested in the next chapter's title. But the reality is more
complex than that title indicates.

CHAPTER 6

"I AM BEING RAPED BY VDOT":

VIRGINIA'S AND MARYLAND'S STRUGGLE FOR CONSENSUS

The local project ultimately will arc 36 miles from Cabin John in Montgomery County east and south to a point in Prince George's County where the projected Jones Point Bridge will cross the river into Alexandria. A similar freeway band will be constructed by the State of Virginia on the far side of the Potomac.

—Evening Star, 1957.³⁶⁵

And then there's the poor motorist who thinks of the Beltway as one road. How misguided! —Lon Anderson, American Automobile Association, 1999.³⁶⁶

Highway maps do not indicate it. Nor does the national vernacular, which speaks of what happens politically inside and outside the Beltway. Even local drivers, who often use only small portions of the highway in their daily lives, tend not to notice. But since its origins, the Capital Beltway has indeed been—at least in a physical sense—two separate roads, a longer one in Maryland and a shorter, "similar freeway band" in Virginia. The incongruities between the states can be striking, as seen by the Baltimore County resident who "drove from Md to Va and thought I was in another world."³⁶⁷ They can be superficial, in the eyes of the Fairfax County resident who finds

³⁶⁵ "First Section Dedicated of Circumference Road," Evening Star, 25 October 1957: A-25.

³⁶⁶ Lon Anderson, "Another Collision on the Capital Beltway," AAA World, January/February 1999: 6a.

³⁶⁷ Beltway Survey #551.

it "odd in that it's the same road in two states so that there are little tiny differences on the 'same' road."³⁶⁸

In either case, the differences do exist, and are noticeable to the observant driver. A woman from Stafford County, Virginia, to the south of Washington, writes that "what really distinguishes the CB [from other highways] is the fact that it is maintained by 2 different states with 2 different maintenance standards. And until just recently, the exit numbering system was different too! That can be confusing to someone traveling through!"³⁶⁹ This point underscores the implications of the Beltway's dual-state supervision. The physical differences between each state's segment of the road have little significance in and of themselves. But when those differences have effects on the people who use the Beltway—as in creating confusion for travelers—they cease being inconsequential.

Transportation studies concerning the Beltway, initiated separately by both states in the mid-1990s and continuing through 2001, suggest both that the differences between the Maryland Beltway and the Virginia Beltway have far-reaching implications, and that those differences are philosophical as well as physical. In an editorial column of the AAA members' magazine, on a special page directed at Washington-area readers, local AAA staff director Lon Anderson in 1999 shared his concern that the divergent paths each state appeared to be taking would work to the detriment of all Beltway drivers. Assessing both approaches, Anderson noted that Maryland, pressed for space with minimal right-of-way remaining on the Beltway, was

³⁶⁸ Beltway Survey #598.

³⁶⁹ Beltway Survey #247.

looking closely at adding transit to or near the Beltway, while Virginia, with more space to expand, was focusing on adding more lanes. Both solutions could be beneficial to drivers, Anderson acknowledged—but only if the two Beltway segments operated independently as separate roads.³⁷⁰

Of course, they do not; each is part of the same loop. As a result, the two approaches are flawed. Maryland, Anderson argued, was not seriously considering significant lane expansion; Virginia was not emphasizing the possibility of additional transit. Given the contrasting approaches, Anderson envisioned drivers on a future version of the Beltway finding free-flowing traffic only on the Virginia side, and transit users in Maryland stymied when they literally reached the end of the line at the state border. "So there you have it," Anderson wrote:

One road—vital to our region—and two agencies with anything but a unified, coordinated version of that road. The only problem is this: For motorists who must use the Beltway, it's not a "Maryland" or a "Virginia" highway. It's one road, and it's the Capital Beltway. And the success of the Beltway, the epicenter of our local transportation system, is critical to our region; the quality of our lives and our economy are largely dependent upon it.³⁷¹

The underlying problem, Anderson felt, was the lack of coordination between the two states in their planning. Officials from both states told him that they were working together, but "from what they said, it would be difficult to believe the state officials were talking about the same road, much less to each other." I developed the same impression while attending six planning workshops between 1996 and 2001, three related to the Maryland study and three to Virginia's. As I will detail later in this chapter, each state appears to be on a distinct and unique path with its projections for an

³⁷⁰ Anderson, "Another Collision."

³⁷¹ Ibid.

improved Beltway; equally as important, each state has a different idea of how to handle the planning process along the way.

Anderson's observation about a lack of coordination between Virginia and Maryland is not new; in fact, the pattern dates back to the earliest days of the Beltway's design and construction. The Baker engineers in Maryland and the HNTB engineers in Virginia had little to do with each other during the design phase. Slade Caltrider and William Shook, who supervised construction for Maryland's State Roads Commission, confirmed that they did coordinate with their Virginia counterparts for issues relating to bridge-building across the Potomac, but could not point to coordination beyond that. From "the construction point of view," Caltrider recalled, "there was definitely cooperation" in planning the Cabin John, now the American Legion Bridge.³⁷² That project was the extent of the cooperation, according to Shook:

No [coordination], only where we touched them at the American Legion Bridge, when we were building that. Of course there was some coordination with them on the Virginia side—we built the bridge and Virginia connected the roadway to it. But during the construction phase, you don't have a whole lot of coordination other than just getting together when certain features are going to be completed . . . And usually, on the case of the bridge, it was a case of getting the bridge in first, particularly the Virginia abutments and spans, so that Virginia could then build up to it. But other than that, it was very minimal contact in Virginia.³⁷³

In conversations with me, *Sidney Miller, who helped design Virginia's Beltway with HNTB, gave reason to believe that the lack of coordination was indeed pervasive and has had profound implications. Miller, who was eager to speak at length about any other aspect of the Beltway or highways in general, refused to go into detail only on this one issue. I asked him whether, "from a . . . technical point of view," the Beltway was

³⁷² Interview with Slade Caltrider.

³⁷³ Interview with William Shook.

"really two roads that happen to connect at two river crossings, and that have notable differences depending on which side you're on." "That's exactly right," Miller said. "And I think you hit it right on the head." There were underlying similarities, he noted, because engineers in both states had to meet minimal federal standards. "But within the context of what was actually designed above and beyond the minimum . . . there lies the difference. So you do get a much different feeling when you drive the Beltway in Maryland than you do the Beltway in Virginia."

When I asked if anything surprised him early on when he first drove on the Maryland side, Miller interrupted with a laugh and said he would rather not comment. "I was very proud of what was done in Virginia. There are some things I would do a little differently if I were doing it now, and one can say the same thing about Maryland, I'm sure. . . . So I would just comment in that regard that, you know, hindsight is marvelous." What thoughts was Miller uncomfortable sharing? I suspect there were engineering elements of the Virginia side which he found had not been designed as effectively as Maryland's; elsewhere in our conversations he had no problem in pointing out what aspects of Virginia's highways he found commendable. But the root cause of the differences, in any case, was the two almost entirely uncoordinated planning processes.³⁷⁴

More recently, Maryland and Virginia have cooperated more meaningfully on matters related to the Beltway, and as Anderson indicated in his editorial, there has been some crossover in the 1990s Beltway studies although he believed it was insufficient. Charlie Watkins—who in 2001 serves in the same position, as District Engineer of

³⁷⁴ Interview with *Sidney Miller, 23 February 2001.

Maryland's State Highway Administration's District 3, which William Shook held during the Beltway's original construction—makes a critical distinction between types of coordination. From his standpoint, "we have great communication" with the Virginia Department of Transportation (VDOT), the successor to the Virginia Department of Highways which designed the Beltway. Administrators and chief engineers from both states "deal with each other constantly," but—and here is the key point—"from an operational standpoint. The difference is," Watkins explains, "even though we communicate, there are different philosophies sometimes . . . totally different philosophies."³⁷⁵

Coordination, then, does exist on the operational level, but not on the underlying philosophical level. This is why overt differences between the states may appear "little" and "tiny," as the states work together enough to keep the Beltway functioning fairly smoothly, but other larger differences outside the view of everyday drivers contrast in much stronger ways. Watkins's observation suggests that the two-headed Beltway is in fact one pawn in a much larger game. The clash in approaches to dealing with the Beltway is symptomatic of a broader philosophical battle between Virginia and Maryland, and in that sense the Woodrow Wilson and American Legion Bridges span a divide deeper than just the Potomac River.

Political scientist James Gimpel has suggested a number of reasons for the political and ideological tensions between the two states. Party politics is one, with Democrats dominating in Maryland and Republicans in Virginia. The role of government is another; Maryland officials tend to believe that it should play an active

³⁷⁵ Interview with Charlie Watkins, January 17, 2001.

part in redistributing wealth, while Virginia officials hold to a less intrusive role. Liberals are often more left-leaning in Maryland than in Virginia, while conservatives frequently tilt farther to the right in Virginia than in Maryland. Gimpel and Jason Schuknecht trace one cause of the liberal/conservative difference to federal employment opportunities dating back to the New Deal. When workers flocked to Washington to take advantage of jobs in the newly-expanded federal government, civil service workers (often liberal and/or African American) took positions mostly in Maryland, while military workers (often conservative and/or Republican) concentrated heavily in Virginia, clustered around military installations.³⁷⁶

The net result of these and other factors is a conservatism in Virginia and a liberal approach in Maryland which play out in political, fiscal, environmental, and transportation spheres, among others.³⁷⁷ Because of these underlying philosophies, the states' decisions regarding the Beltway vary drastically even though both states use the same sets of statistics—travel demand forecasting models provided by the Metropolitan Washington Council of Governments's Department of Transportation Planning—in their planning.³⁷⁸ And transportation contrasts have not been limited to the Beltway; Maryland, for example, has focused since the early 1990s on "thinking beyond the pavement"—that is, implementing innovative strategies to encourage transit, pedestrian,

³⁷⁶ James G. Gimpel and Jason E. Schuknecht, "Setting Different Courses: Along the Potomac, a Fiscal and Philosophical Divide," Washington Post, 21 January 2001: B5.

³⁷⁷ For discussions of the contrast in fiscal, environmental, and political spheres, see R.H. Melton and Lori Montgomery, "Divided by Shared Concerns," Washington Post, 7 January 2001: C1; Anita Huslin, "Md. Expands Environment Goals as Va. Retrenches," Washington Post, 16 January 2001: B1; and Michael Leahy, "Bad Blood Across Md.-Va. Border," Washington Post, 13 April 2001: A1.

³⁷⁸ C. Patrick Zilliacus, email to Jeremy Korr, 9 February 2002.

and bicycle travel—while Virginia has continued in most cases to respond to congestion by constructing new roads or widening old ones.³⁷⁹ But the Beltway is perhaps the most visible transportation arena where the contrasting approaches now clash.³⁸⁰ In the remainder of this chapter, I enter into that arena and explore how each state's overarching political and ideological philosophies are brought to bear on the Capital Beltway, within the scope of the ongoing Beltway improvement studies. I examine, in effect, why it matters that the Beltway is most directly controlled by authorities in Maryland and Virginia, as opposed to other jurisdictions.

In doing so, I examine how SHA and VDOT have recently incorporated the public into their planning processes, and how the public has responded to their efforts. Keeping in mind the traumatic effects of the SRC's actions toward Lisa Loflin, Paul Foer, and Neal Potter, I look closely at the specific words and techniques highway officials use to communicate with the public, as suggested by the language step in the fifth operation of the cultural landscape model. Through close analysis of the words used in a public presentation given by a VDOT official, I explain how Virginia residents in particular continue to feel excluded from the planning process even though officials correctly believe they are allowing residents to participate in unprecedented ways. Also drawing on the fieldwork model's fifth operation, I focus again on issues of power, access, and contested meanings, with respect to the different groups taking part in the ongoing planning processes in both states. In addition, I return to the drawing and

³⁷⁹ Lori Montgomery, "Md. Going 'Beyond the Pavement,'" Washington Post, 15 September 2000: A1.

³⁸⁰ For further discussion of the Beltway as a sign of broader philosophical differences, see Alan Sipress, "Beltway Collision: States' Divergent Views May Doom Efforts to Fix Artery," Washington Post, 30 January 2000: C1.

redrawing of boundaries, the model's second operation, by examining Virginia highway officials' and residents' divergent views about changing the Beltway's borders.

In all, by looking at the Beltway improvement studies in Maryland and in Virginia and at related projects, I address these three questions: In what ways and to what extent does the Beltway literally bridge the ideological chasm between the two states? How have the states progressed in seeking more effective solutions to traffic congestion than they did during the time of the Beltway's original development? And how do each state's recent approaches indicate their respective progress in addressing the shortcomings of the transportation planning process of the 1950s?

At times, these questions and my attempts to answer them may seem to constitute more of a policy analysis than a cultural analysis. Yet these policies of transportation planning, these logistics of the decision-making processes over the Beltway's future, are crucial components of the highway's ongoing development. The results of these planning dialogues will have tangible effects on the people, objects, and natural elements on and around the highway. This chapter, therefore, focuses more than some others on the processes which shape the Beltway's form and less on that physical form itself. I begin with a visit to a public workshop in Maryland and subsequent reflections on my experience and on Maryland's approach to the Beltway's problems. I then move on to a public meeting in Virginia, followed by further analysis of that state's approach. The chapter concludes with observations comparing and contrasting the two approaches and the ways in which they address the questions in the previous paragraph.

Pedersen's Paradox: Neither Answer is the Answer

Tuesday, April 18, 2000. Having sat through heavy rush hour traffic on the Beltway, I finally arrive at Forestville High School (near the Beltway's southeastern arc) and find a spot in the parking lot. I see small signs with the SHA logo pointing to the school's main entrance, so I know I've found the right place. It's 7:00 p.m., so the workshop, which is scheduled to run from 6:00 to 9:00, should be in full swing. This isn't a public hearing per se; the notices which ran in the Washington Post alerted me that this is an "Alternatives Public Workshop," in which the public is invited to look at the many options Maryland highway officials have been developing for Beltway improvement, ask questions, and register their concerns. There's a second workshop next week at the same time but on Wednesday, at Bethesda-Chevy Chase High School in Montgomery County. I assume the SHA planned the two workshops on different days so that people with obligations on a given night—including me on Wednesdays—have a better chance of getting to one or the other. In fact, the agency seems to have made a concerted effort to maximize people's chances of getting to the workshops: They're scheduled for separate weekdays, they take place in the evening, and advance notices and the workshop handouts include directions to both sites by Metrorail and bus.

I'm curious about how the SHA and its coordinating agencies are interacting inside the school with the people besides me who have shown up for the workshop. This is the third of these workshops I've been to, so I have a pretty good idea; there haven't been any fireworks yet, and I don't expect any tonight. But I do have, in the back of my mind, thoughts about that contentious 1959 Glen Echo public hearing where the SHA's predecessors made the Cabin John residents so angry. I also have the recent memory of

attending public meetings as part of the parallel Virginia process, which I'll describe in the next section of this chapter. If the people attending tonight's workshop aren't as heated as the ones in Virginia or in Cabin John, why aren't they? What is the SHA doing, what are its plans saying, to make the public comfortable?

As I approach the entrance, I see a few people standing behind card tables near the door and talking to each other. These turn out to be, at one table, proponents of the Purple Line, a proposed rail transit route which would roughly parallel the Beltway. Their opponents are right next to them at the second table. From the first table, I take a purple flier with the bold heading "Build the Purple Metro Line NOW!" From the second, I snag a slightly darker purple flier titled "The Purple Line could put us in the RED Some rail lines make sense, but the Purple Line is NONSENSE!" The first flier is marked by the logos of the Sierra Club and the Coalition for Smarter Growth, a local group of pro-transit activists; the second only by someone's email address. I belong to mailing lists and listservs for groups making the kinds of arguments on both fliers, so I know that this feud is less about the Beltway and more about what type of transportation network (increased roads and bridges or increased transit and pedestrian/bicycle access) is optimal in general. I leave the Purples behind and walk inside to sign the SHA's register of evening attendees.

Inside, I expect to see more detailed versions of what I found at workshops two years and four years ago, and I do. Still, there's not that much difference, and I wonder if this process will ever end; it almost seems set up to be indefinite. The original Beltway planning left social and environmental concerns out of the picture, but at least the road was planned from start to finish in about ten years. In this study, every time I

attend a workshop, the timetable has been pushed back to make it seem that exactly no progress has been made.

Consider: Maryland initiated in the early 1990s what it then called the Capital Beltway High Occupancy Vehicle (HOV) Lane Study to consider the possibility of introducing HOV lanes on portions of the Beltway. Transportation planners measure highway efficiency using "Levels of Service" (LOS) ranging from A to F, where LOS "A" represents free-flowing traffic, "E" indicates that the roadway is at maximum capacity, and "F" represents gridlock. When 1990s studies showed that Maryland's Beltway segments all operated at LOS "E" or "F" during rush hours, and would reach Level "F" in 2020 if no changes were made, the SHA began examining whether adding HOV lanes would improve the future projections. It then restarted the study in late 1994 with a new emphasis on multimodal improvements, that is, adjustments to the transportation network which would address more than basic automotive travel. After public workshops in December 1996, the SHA decided to switch the process's title from HOV to "The Capital Beltway Corridor Transportation Study" to reflect the broader alternatives under consideration.³⁸¹

Since at least 1995, the SHA has envisioned the study in four phases. In Step 1, "Purpose and Need," engineers go through technical studies to "assess the need for transportation improvements," and bring in the public and other agencies for input. In Step 2, "Preliminary Alternatives," the SHA collects and analyzes data including natural, social, and economic inventories; develops preliminary options for

³⁸¹ Maryland Department of Transportation, State Highway Administration, "Capital Beltway Corridor Transportation Study: Alternates Public Workshop, April 18, 2000 and April 26, 2000" (Baltimore: Maryland Department of Transportation, 2000), 1.

transportation improvements; and again brings in the public and other agencies. During Step 3, "Detailed Study," the SHA develops detailed alternatives, prepares a draft environment impact statement, and once again opens the process for public and agency participation. Finally, in step 4, "Final Recommendation," the SHA undertakes additional studies if necessary, selects a final choice for action, prepares a final environmental impact statement, and submits the plan to federal authorities, including the Federal Highway Administration, for approval.³⁸²

I've noticed that these four phases provide repeated opportunities for the public to become involved and for the SHA to give serious attention to environmental consideration. I've also noted that these steps require so much work that the overall study seems interminable. When I first attended a public workshop in December 1996, the SHA provided this timetable:

Step 1 (Purpose & Need): Summer 1995-Fall 1995
Step 2 (Preliminary Alternatives): Fall 1995-Winter 1996/1997
Step 3 (Detailed Study): Spring 1997-Winter 1997
Step 4 (Final Recommendation): Winter 1997-Fall 1998³⁸³

The next set of workshops was held in the spring of 1998. There, I received this updated schedule:

Step 1 (Purpose & Need): Summer 1995-Fall 1995
Step 2 (Preliminary Alternatives): Fall 1995-Fall 1998
Step 3 (Detailed Study): Fall 1998-Spring 1999
Step 4 (Final Recommendation): Spring 1999-Fall 1999³⁸⁴

³⁸² Maryland Department of Transportation, State Highway Administration, "Capital Beltway Corridor Transportation Study: Informational Brochure, Public Workshops, March 25, 1998 & April 2, 1998" (Baltimore: Maryland Department of Transportation, 1998), 5.

³⁸³ Maryland Department of Transportation, State Highway Administration, "I-495/I-95 Capital Beltway HOV Study, Alternatives Public Workshops, December 11, 1996 & December 12, 1996," handout of slide presentation, n.p.

A year and a half later, the SHA's project co-manager for the study gave a presentation during a symposium I was leading. She gave this timetable to the audience:

Step 1 (Purpose & Need): Summer 1995-Fall 1995
Step 2 (Preliminary Alternatives): Fall 1995-Early 2000
Step 3 (Detailed Study): Early 2000-Fall 2000
Step 4 (Final Recommendation): Fall 2000-Fall 2001³⁸⁵

Months after this workshop I am attending, I will receive in the mail (in early 2001) a newsletter providing information on the study's progress, with this partial schedule:

Step 2 (Preliminary Alternatives): Fall 1995-Spring 2001
Step 3 (Detailed Study): 2001/2002-2002
Step 4 (Final Recommendation): 2002/2003-2003³⁸⁶

But tonight I don't know yet that the project will soon be pushed up by at least two more years. Still, I'm dubious that I'll see much more than I did during the last round a few years ago, since the process has been moving so incrementally until now.

In the foyer, a representative from SHA asks me to sign in and asks if I want to register for the mailing list to receive future mailings, which I do. I head to the cafeteria, where the action is. I see immediately that there is more of a turnout than at the first workshop I attended back in 1996, when only 16 people came; this time, visitors don't outnumber the many state officials and planners and the reporters milling around. Most of the room is set up with maybe two dozen displays. Off to the side, in an enclosed area, is the most formal part of the presentation, a 10- or 15-minute slide show,

³⁸⁴ Notes taken at public workshop, 25 March 1998.

³⁸⁵ Maryland Department of Transportation, State Highway Administration, "Briefing to the Montgomery County Historical Society, October 24, 1999," handout of slide presentation, n.p.

³⁸⁶ Beltway Connections: Newsletter of the Maryland Capital Beltway Corridor Transportation Study, Winter/Spring 2001: 3.

summarizing the study to date, which is being shown continuously. I take a copy of the printed version of the slide show, knowing it's exactly the same thing I would see if I sat down to watch.

The displays in the room fall into two categories. Some of them explain the four types of alternatives the study has identified over the last five years. The others offer information related to the project (sound barriers, house relocation procedures) or represent related agencies (the Maryland Transit Administration and VDOT both have representatives here). I walk around first to the alternatives displays to see how much they've changed since the last workshop. A few options have pointedly been dropped, but many still remain; I can tell that plenty of thought—and more timetable extensions—have yet to come.

The four main alternatives have stayed constant through the duration of the process so far. The first, "Base Case," also called "No-Build," retains the status quo and makes no significant changes to the Beltway, though it does include routine maintenance and safety improvements. My guess is that the "Base Case" will not end up as the final recommendation. It seems to be more of a necessary baseline for comparison than a legitimate alternative to improve traffic.³⁸⁷

Alternative 2 is a combination of what planners call Transportation System Management and Transportation Demand Management (TSM and TDM). In general, the goal of TSM is to maximize the efficiency of existing transportation networks without making any major additions, while TDM aims to reduce the demand on

³⁸⁷ Maryland Department of Transportation, State Highway Administration, "Capital Beltway Corridor Transportation Study: Alternates Public Workshop, April 18, 2000 and April 26, 2000," 3.

highways (for example) by encouraging drivers to change when or where they drive, or how they travel. TSM and TDM strategies cost more than doing nothing, but much less than adding additional lanes or train lines, as in the following alternatives. In the Beltway study, TSM proposals, to optimize the existing road, include ramp metering (controlling traffic flow by placing modified traffic signals on ramps), improved parallel roads, design improvements such as better signs and safer interchanges, truck restrictions, and enhanced enforcement. TDM proposals, to reduce demand for driving on the Beltway, include more Park and Ride lots, enhanced bus transit, better incident management, expanded traveler education and information, and employer-based strategies such as telecommuting and flexible work schedules.³⁸⁸

Alternative 3, which costs more, is to add some sort of an HOV, or High-Occupancy Vehicle, lane. HOV vehicles could be buses, vans, carpools, or anything else with a minimum number of passengers (usually two or three). At this workshop, the SHA is proposing these three kinds of HOV lanes: concurrent flow, where an additional lane in each direction is not physically separated from the rest of the highway and is open to all traffic except for rush hour; barrier-separated, where an additional lane in each direction is separated by a barrier and is limited to HOV traffic at all times; and high-occupancy toll, where single-occupant vehicles can access the HOV lane by paying a toll. In earlier stages of this study, the SHA also considered (but has since dropped) a single HOV lane which would reverse directions at different times of day, a contraflow HOV lane where one lane from the off-peak direction is used during rush

³⁸⁸ Beltway Connections: Newsletter of the Maryland Capital Beltway HOV Study, August 1997: 2-3.

hour as HOV, and the conversion of existing lanes to HOV during rush hour. All of these options raise concerns for some drivers, who would rather see any additional lanes open to the benefit of all drivers.³⁸⁹

Finally, Alternative 4, perhaps the most expensive, includes the creation of new transit lines to support the Beltway. Earlier stages of the study looked at a variety of options including monorail and several forms of bus service, but at this workshop the choices have been narrowed down to six routes, which are displayed in separate colors on posters and handouts, and the possibility of express bus service as a supplement. These options include both heavy rail (like Washington's Metro, usually powered by an electrified third rail and separated from traffic) and light rail (like trolleys, usually powered by overhead catenary systems and often mixing with street traffic). The current alternatives include heavy rail running outside, inside, or along the Beltway and light rail doing the same. Any of these alternatives, if ultimately selected, would likely be dubbed the "Purple Line," a reference to the Metro's five existing heavy rail lines indicated by different colors.³⁹⁰

³⁸⁹ Beltway Connections: Newsletter of the Capital Beltway Corridor Transportation Study, March 1998: 2-3; Maryland Department of Transportation, State Highway Administration, "Capital Beltway Corridor Transportation Study: Alternates Public Workshop, April 18, 2000 and April 26, 2000," 3-4.

³⁹⁰ Maryland Department of Transportation, State Highway Administration, "Capital Beltway Corridor Transportation Study: Alternates Public Workshop, April 18, 2000 and April 26, 2000," 4-7; Beltway Connections: Newsletter of the Maryland Capital Beltway HOV Study, Winter 1998: 2-3. For more on the Purple Line, see Josh Kurtz, "Purple Line Debate Has Taken Circuitous Route," Montgomery Gazette, 17 March 2000; and Jo Becker, "New Md. Metro Route Down to 2 Choices," Washington Post, 1 September 2001: B1.

SHA personnel stand behind display tables for each of these alternatives, talking quietly with visitors and with each other. I'm already familiar with these options, so I circle around to the rest of the tables to see what else the state wants me to know. One display tells me about the upcoming reconstruction of several Beltway bridges in Montgomery County. I take brochures detailing the four stages of the rehabilitation project ("traffic impacts: severe") and suggesting alternate routes, and guess—correctly, I will learn months later—that the projected timetable for that project too will be extended beyond the figures I'm looking at. Another table offers an orange brochure titled "Community Resource Guide on Sound Barriers," explaining how to request that SHA consider placing sound barriers in specific locations. I chat briefly with the specialist standing in front of the table and consider that even if, for all I know, many of the people who have tried to petition for sound barriers have not found satisfaction, at least the SHA is providing recognition and guidance up front that this is a serious issue, which it did not do in the 1950s or 1960s.

At another display, a representative from the Woodrow Wilson Bridge replacement project stands next to a variety of brochures and newsletters; the bridge reconstruction itself raises many of the same issues I'm addressing in my study but which I'm setting aside for the moment because it's being run separately from the Maryland and Virginia Beltway improvement studies. The Maryland Transit Authority, which might play a role if some sort of transit is selected, has a small display and a representative standing by. Even Virginia has an unstaffed table with fliers giving contact information about its own study. I note that at least tonight's workshop acknowledges the ongoing, parallel study across the Potomac, but I also wonder if this

is an indication of the extent of the states' coordination: acknowledgment and information-sharing, but not much more.

The evening is decidedly low-key. I speak with several officials at different displays, listen to others answering individual questions, watch them ask for people's contact information so they can personally follow up on the questions they're fielding. Of the several dozen members of the general public on hand, I sense a mood of interest, and in some cases of desire for a particular alternative (e.g., a Purple Line), but no elation or frustration. No one with a question or concern seems to have trouble finding a state representative; in fact, SHA and other staff are standing everywhere I turn, and I can't find any lines of people waiting for their turn to talk.

I watch many discussions last for ten, fifteen, twenty minutes, as visitors and officials go deep into conversation. I don't know if the answers to questions people are asking are satisfactory, but the state representatives certainly don't appear to be brushing them off, as they did very clearly at the 1959 hearing. It could be that these alternatives under consideration are simply not that controversial, with few or no houses at stake: The only protests I've seen are the handful of Purple Line opponents outside tonight and a few members of the Rock Creek Coalition (mentioned in Chapter 5) at the 1996 workshop distributing fliers about possible negative impacts to Rock Creek.³⁹¹ Officials

³⁹¹ However, at the one of the two 1996 workshops I did not attend, at Albert Einstein High School in Silver Spring, a reporter noted that "the possible solutions displayed . . . were met with resistance and skepticism by those who attended. About 180 Montgomery residents, many of whom represented local civic groups . . . handed out literature about the Beltway's impact on their neighborhood." I believe this reaction may be a function of the study's focus at that time on adding HOV lanes; after this workshop, the overall study's focus was expanded to encompass the other alternatives, and I have not seen the same type of concern expressed since. See Lisa Fine, "Clean Air, Flowing

on hand appear outgoing and responsive to the public on hand, and in fact some of the alternatives displays indicate that certain choices to date have resulted from input from previous phases of participation by the public and coordinating agencies. In case the point isn't clear, I find on the first page of the main handout that

Your opinion matters—These workshops are intended to provide an opportunity to discuss with our project team your thoughts and concerns about the project and to provide written comments to us. The project team will carefully review and consider the concerns and preferences expressed by the public during these public meetings. To assist you in providing comments, we have provided a pre-paid postage mailer as well as team member addresses and telephone numbers.³⁹²

In my 90 minutes at the workshop, I see few overt pieces of evidence that the project team has in fact carefully reviewed and considered the concerns and preferences expressed by the public in earlier phases; the SHA displays do not include, for example, a poster of "How We've Responded to Your Concerns." But more importantly, I also see no signs that the SHA is not responding to the public's concerns. Virginia highway officials also claim to be carefully reviewing and considering public concerns—and they do, as I will explain in the next section—but some members of the public are upset by what Virginia does after doing the review and consideration. I see none of that tonight. The empty folder I brought now stuffed with handouts, brochures, SHA and MTA representatives' business cards, posters, and handwritten notes, I say goodbye to the staffer at the door and head to my car around 8:30.

Traffic Head Officials' Wish List," Washington Post, 19 December 1996: Prince George's Weekly, 1-2.

³⁹² Maryland Department of Transportation, State Highway Administration, "Capital Beltway Corridor Transportation Study: Alternates Public Workshop, April 18, 2000 and April 26, 2000," 1.

"It used to be," Neil Pedersen told me months later,

when I first came here, the engineers would develop plans, basically either in the office here in Baltimore or in the consultant's office. And we'd go out with a full set of plans and show it to the public, and say, here's what we're planning to do, any comments? And we'd get back comments, and we'd make a few adjustments based on what we heard. But basically the decision was made by the State Highway Administrator, or before that, the State Roads Commission, on what ought to be done, and we'd proceed forward. Today, we actually involve the public from day one in our planning of facilities.³⁹³

Pedersen, in 2001 the director of the SHA's Office of Planning and Preliminary Engineering, has overseen the Corridor Transportation Study since its start, as well as many other highway projects in the state over two decades. He and SHA's District 3 Engineer Charlie Watkins both pointed out to me that the level of public participation in the Beltway's Corridor Transportation Study is probably the highest it has ever been for a Maryland highway project. Both expressed enthusiasm over the benefits of public contributions, though for different reasons; Watkins noted that he felt "much more" comfortable than in years past that the process involved the public to an appropriate degree. Like Pedersen, he recalled how drastically the planning process had shifted during his tenure:

I've been here 30 years, and I can tell you that, other than the projects that we were required by law to have public meetings on, we didn't have public meetings on anything we didn't have to. We are now in a mode totally opposite that. We try to involve the public in everything.³⁹⁴

Watkins pointed to a pair of positive effects of increased public participation. First, he acknowledged that highway officials and engineers do not see all important aspects of a given project: "We are the forest, if you will. And sometimes we can't see

³⁹³ Citations to Pedersen draw from interview with Neil J. Pedersen, 5 February 2001.

³⁹⁴ Citations to Watkins draw from interview with Charlie Watkins, 17 January 2001.

the trees because of the forest. And they have a perspective we don't always have."

Beyond that, "dealing with the public up front is not only good customer service, it makes good business sense." If residents raise valid concerns after construction has begun on a highway, it costs the state much more to deal with than if the issue had been addressed much earlier in the planning process. Thus the seemingly interminable highway study I referred to earlier is interminable for a reason:

It's a little time-consuming up front, and people think we're spinning our wheels here, we're not making any progress; but I know, after 30 years in the business, how much time we're saving at the back end of the process, which is the expensive end. That's where it's important. I mean, if you're not delaying the project when you're building it, you're saving money. You're certainly reducing the inconvenience to everybody because you get it done a lot quicker because all of the problems have been identified and all of the solutions have been agreed to.

This businesslike approach is a good reason for the shifted approach to public participation, but still does not explain why Maryland officials seem to have embraced it wholeheartedly.

They have done so, I believe, because expanded public input meshes perfectly with a concurrent shift in Maryland's philosophical stance toward transportation planning. I noted earlier in this chapter that state officials have, since the early 1990s, begun to think "beyond the pavement," exploring transportation solutions well beyond new and expanded roads. For at least the previous four decades, the state's approach to congestion—in fact, virtually every state's approach to congestion—was to expand road capacity. Within such a framework, the conclusion of almost every project was foregone: build new roads or widen old ones. Citizen input would be relatively unimportant in such a process; as Pedersen noted, the SHA did listen to concerns and occasionally act on them, but not in any large capacity.

However, if planners go into projects legitimately unsure of what the best solutions are, as they have recently been doing in Maryland, then additional perspectives can contribute significantly to the development of project plans. In the Corridor Transportation Study, a wide variety of alternatives have been under consideration from 1995 through at least 2001; because the project planners themselves have not been sure which options will win out, it is unlikely that they would receive public comments as challenges. In other words, in a transportation planning framework in which no single type of solution is considered by default to be the best, public comments and concerns may be viewed by planners as constructive and helpful rather than as challenging and intrusive.

The question remains as to why Maryland shifted its philosophical stance so drastically when other states, including Virginia, have not. Part of the reason is likely due to the political and ideological factors unique to Maryland and identified in the first section of this chapter. But more than that, I believe that since the early 1990s, Maryland highway and political officials have bought into a certain understanding of transportation and land-use dynamics which I call Pedersen's Paradox. Several individuals I spoke with during the course of my research expressed similar views, but Pedersen articulated this framework most clearly.

Both in the Washington area and nationally, transportation dialogues among the public, interest groups, and governments are often cast in terms of highways versus transit, or roads versus everything else (transit, cycling, pedestrian facilities). I saw this at the workshop in December 2000, when the warring Purples outside the Forestville High School argued either for or against the Purple Line transit alternative. Pedersen's

Paradox, however, states that the road solution is wrong and the other solutions are wrong. One wrong solution does not make the other(s) right: there is no right answer to the present-day problem of congestion.

Why? Pedersen explains the paradox in this way. First, highway forecasters project that, in the Washington area, traffic counts will expand through the roof in the decades to come, far beyond what existing roadways can hold. Those planners are well aware that the original projections for the Beltway underestimated the actual traffic which would envelop it, and can see how much additional capacity would have to be added to the Beltway to absorb the traffic in the future projections. Additional lanes seem the obvious solution. But physical limitations rule this out, because Maryland

has, unlike Virginia, . . . more limited right of way. The most we think that we can do, from a roadway standpoint, within the existing right of way, certainly through the northern part, is one more lane. And even then, we would have basically roadways from edge of right of way to edge of right of way. And we would have to put up retaining walls right up against the edge of right of way to fit that in. It would be very expensive to do, very disruptive to traffic while we do it. And demand would far exceed the capacity that we could put out.

Because of the physical constraints, adding more than one lane in each direction to Maryland's Beltway would require enormous expenditure to purchase and relocate houses and businesses, let alone deal with the problems of Rock Creek Park all over again. For these reasons, additional lane capacity in Maryland is not a viable solution. (This is also the case for some other highways in addition to the Beltway.)

Second, Pedersen explains, the obvious alternative is transit; after all, people who argue against highways often advocate expanded transit. But the types of trips most drivers take on the Beltway do not lend themselves well to transit. And those trips are structured around the region's (and most of the country's) low-density development

patterns, which also are not well-suited to transit. Most Beltway users travel only a few exits to go

from one relatively low-density suburban location to another relatively low-density suburban location, neither of which is right along the Beltway. And in order to use transit along the Beltway would involve a minimum of at least two transfers, in some cases more. And a general rule of thumb you have in transit is, once you require someone to make more than one transfer, you almost always will lose the trip, unless it's just someone who is transit dependent and who has no choice.

In other words, expanded transit would benefit the poor, young, old, and others without car access, but would not be effective as a solution to Beltway congestion. "It's not saying that it shouldn't be done," Pedersen notes. "But it's saying, there's going to be a pretty limited effect of trying to build some type of expanded transit. And if you look at the reduction in vehicular demand of the Beltway, at best we are reducing two percent of the vehicular demand." Transit, then, is also not a viable solution to the Beltway's traffic problems.

If more lanes and more transit are both ineffective solutions, if neither of the vocally championed answers is the answer, what is left? There are other answers, Pedersen explains, but they are complex enough that no one—certainly not transportation departments with highway tunnel vision—has looked at them. If neither obvious answer is the answer, then planners must look to external factors for viable ways to address the problem of congestion. For example, Pedersen suggests, Maryland since the 1980s has experienced what planners call an imbalance in the job-worker ratio, meaning that jobs are concentrated in areas (e.g., the I-270 corridor) where housing is unaffordable to many of the people who work there. As a result, workers must commute long distances, filling the area's transportation network. Taking steps to

improve the job-worker ratio, for instance by making residences more affordable in areas close to areas of concentrated employment, could decrease the percentage of workers who have to travel long distances to work, and do it without adding lanes or transit.³⁹⁵

Other external factors include highly subsidized parking and inexpensive gasoline, which enable relatively easy driving as a part of life for those who can afford it.³⁹⁶ Significantly higher-priced gas and the reduction of parking subsidies could discourage reliance on automobiles.³⁹⁷ All of these decisions, Pedersen recognizes, are policy questions which highway planners are generally not in a position to make, and politicians themselves are hesitant to consider them because of the political risk inherent in taking unpopular actions. In his history of VDOT, Gary Bowman supports Pedersen's assertion that congestion concerns are usually in reality "problems of will," where neither politicians nor drivers have the will. Engineers, Bowman argues, know that traffic problems can be solved by, for example, imposing high tolls, but that solution is not going to happen. He quotes Edward Banfield:

The "price" of solving, or alleviating, some much-talked-about city problems, it would appear from this, may be largely political. Keeping congestion at low levels during peak hours would necessitate placing high toll charges on roads at the very times when most people want to use them; some would regard this

³⁹⁵ For further discussion of the job-worker ratio, see Alan Pisarski, Commuting in America (XX: Transportation Foundation, 1996), 78-80.

³⁹⁶ A broader discussion of externalities appears in James J. MacKenzie, Roger C. Dower, and Donald D.T. Chen, The Going Rate: What It Really Costs to Drive (Washington: World Resources Institute, 1992).

³⁹⁷ See, for example, Donald C. Shoup, "Cashing Out Employer-Paid Parking: A Precedent for Congestion Pricing?" in Curbing Gridlock: Peak-Period Fees to Relieve Traffic Congestion, vol. 2 (Washington: National Academy Press, 1994), 152-195.

as grossly unfair (as indeed in a way they would be) and so the probabilities are that if any official had the authority to make the decision . . . he would not raise tolls at rush hour.³⁹⁸

This very scenario played out, months after I attended the Beltway workshop, with respect to one of the alternatives proposed. One of the HOV options was for so-called HOT lanes, or High Occupancy/Toll, in which single drivers could move into HOV lanes otherwise reserved for vehicles with at least two people by paying a toll. Maryland officials had been studying this option since at least 1998, drawing on existing HOT lanes on I-15 in San Diego, I-10 in Houston, and California Route 91 in Orange County. HOT supporters pointed to surveys in California, where some working-class drivers appreciated the option of paying for free-flowing traffic when otherwise faced with, for example, even more costly penalties for not picking up their children in time from day care. Critics in California as well as Maryland, however, charged that the HOT lanes were "Lexus lanes," stratifying the highway system by class and making better roads affordable only to the wealthier.³⁹⁹

The SHA and the Maryland Transportation Authority (MdTA) folded its HOT analysis into a broader Value Pricing Study which also examined strategies including time of day/dynamic pricing (where toll levels fluctuate based on levels of congestion or time of day) and congestion fees (where drivers pay tolls to enter congested areas.)⁴⁰⁰

³⁹⁸ Qtd. in Gary M. Bowman, Highway Politics in Virginia (Fairfax, Va.: George Mason University Press, 1993), 124.

³⁹⁹ Alice Reid, "A HOT Alternative to the Slow Lane?" Washington Post, 19 March 1998: B1, B7. See also Neil Gray, letter to the editor, Washington Post, 1 February 2001: A21.

⁴⁰⁰ Value Options Newsletter, Fall 1999 and Spring 2000 issues.

By early 2001, that study had progressed far enough for the state to schedule and announce a series of four public workshops in the Washington and Baltimore areas to address the potential use of value pricing on highways including the Beltway and I-270.⁴⁰¹ But on the same day the first workshop was to be held, the SHA abruptly postponed the entire series, "prompted," according to a reporter, "by a flurry of calls and letters from residents and state legislators after recent publicity about the proposal."⁴⁰²

In a follow-up public notice, the SHA couched its defensiveness in careful terms:

A great deal of interest has been generated by the Variable Pricing Study. As a result of feedback received . . . a number of issues have been raised that the Department would like to address at the rescheduled public workshops about this congestion relief method and in the subsequent research report which will summarize the study's findings, recommendations, and public comments. The postponement will allow these issues to be more fully researched and more specifically addressed.⁴⁰³

The SHA hoped to explain the rationale behind value pricing at the rescheduled workshops, but it never had the chance. Five months later, after further study, Maryland Transportation Secretary John Porcari announced plans to apply for \$10 million in federal grants to test HOT lanes on parts of U.S. 50 and perhaps I-270. The next day, Governor Parris Glendening reversed Porcari's decision by ordering the state's Department of Transportation to scrap all HOT lane plans. An unusual coalition objected to this action; representatives for pro-transit and pro-highway groups both expressed dismay that Maryland would not at least test the concept. But Glendening

⁴⁰¹ Angela Paik, "Md. Considers Rte. 50, I-270 Toll Lanes," Washington Post, 6 January 2001: A1; "Public Notice," College Park Gazette, 11 January 2001: A-15.

⁴⁰² Angela Paik, "Md. Delays Toll Road Hearings," Washington Post, 25 January 2001: B3.

⁴⁰³ "Public Notice," College Park Gazette, 25 January 2001: A-25.

cited class as the basis for his decision, noting that "it's unfair in terms of the economic impact. . . . [I]f you're a working person out there making \$25,000 a year, an extra \$25 per week is a lot of money."⁴⁰⁴ That may be accurate, but HOT lane proponents pointed out that without a willingness on the part of political officials to take some risk, no one would know for certain; Porcari himself argued that San Diego data indicated that, albeit counter-intuitive to Glendening's class-based rationale, people at all income levels were comfortable using HOT lanes when in a hurry.⁴⁰⁵

Whether Glendening's decision was politically grounded or not—ineligible for reelection, he claimed it was not—it points to the difficulty in implementing or even proposing congestion solutions which step outside the comfortable zone of creating or expanding recognized modes of transportation. Because imposing this type of solution and addressing other external factors are the only viable chances for significantly reducing congestion on the Beltway, all of the alternatives in the Beltway's Corridor Transportation Study amount to Band-Aids. No answer is the right answer. Douglas Feaver, who covered transportation for the Washington Post, also offered a recognizable version of Pedersen's Paradox in conversation with me, and reaffirmed the necessity of looking beyond easy solutions:

Should the emphasis be on adding to the existing road net, or should the emphasis be on looking at land-use questions and other alternative possibilities? It has got to be some combination of it. The zealots on both sides are wrong. Zealots are always wrong. There's got to be a middle ground, where you sort some of these things out. Sure, you need to build

⁴⁰⁴ Qtd. in Katherine Shaver, "Glendening Rejects Toll Lanes," Washington Post, 22 June 2001: B1. See also Katherine Shaver and Steve Schmadeke, "Md. Plans Toll Lane Test-Drive on Rte. 50," Washington Post, 21 June 2001: B1.

⁴⁰⁵ Shaver and Schmadeke, "Md. Plans Toll Lane Test-Drive."

a lane or two here and there. Sure, you need to add a bridge here and there. But you can also do some other things.⁴⁰⁶

If planners do not have the ability to implement changes to the underlying, external factors, the best they can do is to find not a single solution but a combination of more traditional solutions which together do the most good.⁴⁰⁷

Maryland, then, in 2001 has made progress in fighting one battle from the 1950s but is still fighting another. The Beltway Corridor Transportation Study suggests that not only has the state incorporated the public into the planning process in much more meaningful ways than in previous decades, but that highway officials have come to endorse and value public participation rather than seeing it as a necessary nuisance. At the same time, the Beltway and other highways of the 1950s and 1960s were intended to relieve the traffic congestion of time; in 2001 the state still seeks solutions for congestion. Maryland has taken a giant conceptual step in branching out to seriously consider modes other than automotive travel as potential solutions, but Pedersen's Paradox suggests that even that step is not enough; the answers to longer-lasting congestion relief may not lie in any single transportation mode or combination but

⁴⁰⁶ Interview with Douglas Feaver, January 26, 2001.

⁴⁰⁷ It is possible, though unlikely, that a massive implementation of one of the proposed alternatives could have a meaningful effect. If Maryland blanketed its suburbs with additional transit, for example, more drivers might be tempted to switch to that mode of transportation, but there is no guarantee that they would. Similarly, an extensive new road-building campaign could alleviate congestion to some extent, but with constant growth in the area's population, any size road network would eventually again become saturated. Highway advocates have frequently advocated the Intercounty Connector as a support road to draw traffic from the Beltway, but the state's own projections indicate virtually no noticeable difference in Beltway traffic by 2020 whether or not the ICC is built in the interim. See Draft Environmental Impact Statement and Major Investment Study, Section 4(f) Evaluation: Intercounty Connector, I-270 to US 1, Montgomery and Prince George's Counties, Maryland ([Baltimore: Maryland Department of Transportation, State Highway Administration, 1997]), VI-24.

rather in adjustments to external factors. Still, using the Beltway as a focus point, I see the state as having progressed on both fronts since the days of William Shook's and Slade Caltrider's State Roads Commission. Virginia, too, began in the mid-1990s its own study of potential Beltway improvements, but its approach to traffic solutions and its level of success in addressing the deficiencies of older planning processes have come in stark contrast to its neighbor across the Potomac.

The Old Dominion Paradox: A Planning Process Both Inclusive and Exclusive

February 9, 1999. It's a cold, dark evening in McLean, Virginia, and this time—unlike the Maryland workshop I will be attending some 14 months later—it matters that I'm late. I've already attended a public workshop in Virginia's ongoing series, in November 1998, and found it similar to what I've seen in Maryland: displays, officials on hand to answer questions, no formal presentations. Other than the actual information contained on the displays, the fact that the representatives present include members of the engineering firm commissioned to help in the Beltway improvement process, and the several people outside the door handing out "Stop the 12-Lane Beltway" stickers, the Virginia workshop did not strike me as particularly different from Maryland's. (In fact, those sticker dispensers—members of the Fairfax Coalition for Smarter Growth—do play an important role in encouraging attendees to challenge the state's plan on multiple levels. My discussion below passes over them, but I will return to them in a different context in Chapter 9.) Tonight's meeting, though, is in a separate category.

What I've missed at both states' workshops is the chance to see how effectively highway officials have learned to communicate since the 1950s. The public workshops are set up in such a way that all information-gathering responsibilities fall to the visitor; I move around the displays at will and ask questions of the engineers and planners standing by, but none of them take the initiative to address my concerns first before I can think of them. If the structure of the workshops were different—if highway officials were to speak to me before I have the chance to do anything else—would they talk in the same ways that their predecessors did, which so angered Neal Potter and Lisa Loflin, or would they more directly address the concerns I might have as a local resident?

Unlike the public workshop series, tonight's meeting will actually have speeches. Here, Churchill Road Elementary School is hosting the "McLean Area Community Meeting" of the Fairfax County Beltway Improvement Task Force, a group of business and civic leaders convened by Fairfax County to contribute local concerns to the planning process. This is a public meeting with representatives from VDOT, but it is not part of VDOT's official series of workshops. Three state representatives will be giving short presentations about different aspects of the Beltway study, and then the floor will open to questions and comments from community members. I know that the Virginia study has proved more contentious than Maryland's, and I'm anxious to see how the state presents itself and how community members respond. Because this is a public meeting, sponsored by the county, its proceedings are a matter of public record, and I thus refer to participating individuals by name.

Unfortunately, as has happened repeatedly during the course of my research, unexpectedly bad congestion on the Beltway delayed my arrival tonight, and I miss the first 20 minutes of the meeting. I grab my small tape recorder, microphone, and notepad, and head for the school's entrance. Inside, the scene is surprisingly different from the state-run workshops. As I peer through the door into the room where the meeting is being held, I see that it's a classroom, not especially large, and it's packed with people. Rows of chairs stretch to the back of the room, each one taken. People stand against the back and far walls; the near wall is crowded with photographers and reporters. At the front of the room, a few people sit at a table with a microphone.

My sense, unlike at the public workshops held in spacious cafeterias, is that there isn't room for me here, or room for anyone else yet to arrive. This seems particularly strange in light of a welcoming letter I later find, thanking participants for taking the time to attend and noting that three previous meetings have drawn close to 1,000 people. Why, then, would this meeting be held in a room which can't hold more than 150 people comfortably? I shake my thoughts aside and squeeze through the door, stooping as I quickly pass by the row of photographers. Near the back of the side wall, between two people with camera equipment, I kneel on the floor and set up my tape recorder. I'll stay in this position, with one knee on the hard floor and craning to see above the seated participants, for the next two hours.

What I've missed was not that important. Fairfax County Board of Supervisors Chair Kate Hanley gave opening remarks, and a VDOT official offered some regional context by speaking about a long-range plan developed by a group of Northern Virginia elected officials. As I sit down, a staff member from the Virginia Department of Rail

and Public Transportation (VDRPT) is finishing up his comments relating the Beltway study to other ongoing corridor studies, including I-66. I'm primed for the final speaker, who will be talking directly about the Beltway improvement study. I have been following for several years the tensions that have developed between VDOT and area residents as a result of this study—tensions I have not seen in Maryland—and I want to see if they appear tonight, and how (or if) the VDOT speaker acknowledges them.

As in Maryland, Virginia's study has run since about 1994, with many years to go. Like Maryland's SHA, VDOT has proposed an extensive array of potential strategies to deal with Beltway traffic. These include the baseline scenario of doing nothing, which was dropped from serious consideration in 1995; a variety of TSM and TDM alternatives, some of which were dropped in 1996 and others of which have been combined; transit service, which was handed off to the VDRPT to study separately and report back on the results; and additional all-purpose or HOV lanes. VDOT has also considered some more unusual options, including additional express lanes dedicated to long-distance trips, limited access during rush hour to vehicles with special permits (dropped in 1995 because other highways and transportation facilities would not have the capacity to absorb the resulting traffic), and construction of a double deck in severely congested areas.⁴⁰⁸

The overall package of alternatives is not that different from Maryland's. But where Maryland is giving very serious attention to the transit options and has virtually ruled out adding more than one lane in each direction, Virginia engineers have said

⁴⁰⁸ Virginia Department of Transportation, Capital Beltway Major Investment Study: Public Information Meeting No. 2 Brochure, September 30, 1996, 6.

publicly that their preferred option is an expanded 12-lane highway (four new lanes), with separate lanes for local and express traffic and one carpool lane in each direction; the next three orders of preference are also for versions of a 10- and 12-lane highway. Widening to 12 lanes and allowing for sound barriers would require cutting down trees and landscaping and taking additional right of way at some interchanges.⁴⁰⁹ In other words, if VDOT chooses to widen the Beltway—and as of tonight, that is the preferred alternative—the land next to the highway will be significantly affected. And that land is no longer the rural countryside *Sidney Miller saw in the 1950s in walking the Beltway's alignment; it's now densely populated neighborhoods, whose residents are sitting in front of me.

Like Watkins and Pedersen in Maryland, VDOT staff have told me (and will continue to, well after this meeting) that its planning process has changed in recent years to incorporate the public and allow input, especially important for cases like this. Bahram Jahmei, an engineer involved in the Beltway study, tells me in a later conversation that in this respect, "we have come a long way. . . . Like five, six years ago, I'd never heard of public involvement. Now, on every project, you have to do public involvement." Jamei considers the extent of public participation at the official workshops to have been appropriate and meaningful: "[M]y thinking is that we have had good participation by the public at least on the highway side. Out of a total of three

⁴⁰⁹ Alan Sipress, "VDOT Unveils Ideas for Beltway," Washington Post, 18 November 1998: B4; Capital Beltway Study Newsletter 5 (May 1999): 3. See also Stephen C. Fehr, "Virginia Study Urges 14 Lanes on Beltway," Washington Post, 27 August 1990: A1; Ann O'Hanlon, "Beltway Backups Dissected," Washington Post, 3 October 1996: Fairfax Weekly, 1; and Alice Reid, "Planners Seek Way to Ease Beltway," Washington Post, 13 October 1996: B1.

meetings we had like 1000 people. And they were very concerned. They were very active, they looked at all the exhibitions, they asked a lot of question." Notably, Jamei's expectations of the public's role differ from Pedersen's in Maryland. Jamei explains that the engineers' "hope is that [the designs displayed at public workshops won't] change tremendously. You might have a couple of feet to the left or right."⁴¹⁰ Pedersen, as cited earlier, gave that approach as the SHA's old viewpoint, where now its engineers expect public input to spur significant changes in proposed designs. Still, Jamei and others at VDOT express confidently to me their comfort that the public plays a much larger role in the process now than in the past. Tonight, I'll see if the public believes it.

The key speech for me at this meeting is by Ken Wilkinson, an environmental planner for VDOT who has driven up from Richmond. Wilkinson will be speaking about the environmental and engineering plans for the Beltway study, probably the two aspects which most concern the people attending. Although he's not an engineer, as he'll stress in his presentation, Wilkinson is the face and voice of VDOT who has been going around making presentations like this one. Because he is serving in that capacity, how he interacts with his audience members helps determine how they feel about the project and about VDOT's feelings towards them. Wilkinson has the opportunity to repeat the performance of former Maryland State Roads Commissioner John Funk, who at the 1959 public hearing in Glen Echo spoke past the individual concerns of the residents attending, or the chance to connect with the public in a different way, drawing on lessons learned by planners in the 40 years since.

⁴¹⁰ Interview with Bahram Jamei, 22 January 2001.

The mood in the room around me is anxious as Wilkinson approaches the microphone. What agenda will he set? What concerns will he address or gloss over? Wilkinson's professional training almost certainly did not include a focus on public or persuasive speaking, yet his choice of words and topics here is key to how he and the bureaucracy he represents are accepted. For that reason, I will reproduce his entire speech below (transcribed from my audiotape), interspersed with my commentary on how I see his choice of rhetoric affecting his speech's effectiveness and reception.

From media accounts, I know that these Northern Virginia residents in the room are agitated about the potential for Beltway widening to affect them. Wilkinson can go a long way toward establishing a bond of trust if he addresses that concern up front. He begins:

Chairman Hanley, I appreciate the opportunity to be here. I recognize a number of faces in the crowd. Perhaps many of you have heard this presentation as often as I've given it. And if any of you are interested in delivering it tonight, I'd be happy to let you do it.

Wilkinson begins on a light note to put his audience at ease. There's a negative subtext, though: Because he admits that he's rehashing speeches he's given before, people sitting in the audience know immediately that they're not likely to hear anything new, or to get satisfaction regarding any concerns they've expressed in the past. A more engaging introduction might let the listeners know that Wilkinson hopes to learn something new from them.

As Chairman Hanley said, my name is Ken Wilkinson. I'm the environmental planner for the department of transportation. I work out of the Richmond office. I've been with the department for almost 24 years, praying for the early retirement any day now.

Again, this attempt by Wilkinson to personalize himself comes at a cost. By emphasizing that he works in Richmond, he's opened himself to criticism that officials from well outside the Fairfax area are intruding and making decisions about communities they know little about.⁴¹¹

One of the things that I want to do tonight is hopefully help you understand the process that this study is going through to accomplish the goal of relief of congestion in the Fairfax area. I have tonight with me, supporting me, a number of people both from Richmond and here in Northern Virginia, staff representing the civil engineering field, the transportation engineers, right-of-way section, and then we have a consultant team that's part of the process here to answer questions that I can't answer.

One of the things that is important for you to understand, and hopefully appreciate: I am not a highway civil engineer. I am not a highway planner. I have a degree in biology, and I am representing the environmental side of the process.

If Wilkinson's objective here is to encourage the audience to feel more comfortable with him because he's not an engineer (with whatever negative connotations that might carry), it doesn't work. Although some bona fide engineers will stand up to take some of the questions after his speech, he's the one VDOT official tonight who's making an official speech about the project. His title doesn't matter.

My goal is to take what is needed from a transportation perspective and what is needed to protect the environment, and make sure that the two can work together to facilitate a workable solution. So that's my role, and as project manager of the study what I'll get to accomplish.

Here he very clearly and helpfully states his responsibilities. But in doing so, he leaves out a critical piece of information. He defines unambiguously what two perspectives are most important (for him) in the planning process: the transportation side and the

⁴¹¹ For more on the parameters of this argument (the extent of centralization or decentralization of highway decision-making in Virginia), see Bowman, 53-54.

environmental side. No mention of the social impact side, which is probably the most significant for the people he's addressing. That may not fall under his aegis; still, by not mentioning it at all, he serves notice that that approach is secondary at best from his perspective.

I've got a presentation that takes about 10 or 12 minutes. I'm gonna go through it with you; I'll add examples where I can. This is, as I said earlier, about the tenth or twelfth time I've done it, and I'm sure you'll hear some differences, but hopefully the general theme is consistent.

I also give presentations about the Beltway, and I've given the same one five or six times with minor alterations. The difference is that Wilkinson's presentation is supposed to summarize an ongoing planning process. If it remains virtually constant, as he says it does, then VDOT is not incorporating much feedback into the Beltway study as it progresses. This is the fourth in a series of these workshops, with nearly a thousand attendees at the previous three, many of whom asked substantive questions. Has Wilkinson's presentation really not changed much, even after those?

First of all, I'm going to talk about why the Beltway should be improved. We've identified about 4 different reasons why we think we should be taking a look at it. These include problems with congestion and safety. Within this area we see reoccurring and extended congestion during the peak hours. You may remember years ago the peak hours started at, say, 7 in the morning, and went until 9 in the morning. Now we're seeing peak occur at maybe 6 or even earlier, and going later than 9. The peak hour is getting longer.

This is helpful; Wilkinson begins with an explanation for the project, and uses an example (extended rush hours) that his listeners can relate to. Still, I doubt they question the need to do something about traffic; their concern is about how VDOT plans to deal with it, and Wilkinson has chosen not to start with that.

We see substandard interchanges, and conflicting merge-weave movements. A merge-weave movement is when you're getting onto the Beltway and trying to get off. Within that distance, you're already on there, and you want to get off, or

if you're already off and want to get on, there's a conflict. That's a merge-weave conflict.

The current Beltway has no accommodations for HOV traffic, for express buses. It has inconsistent lane configurations and the interchanges are very closely spaced. So these all add up to problems with congestion and safety.

We see a growth in the region continuing. The population statistics, provided to us by the Council of Governments, says that by the year 2020, population will increase approximately 46%. With this, at the same time frame, employment is expected to increase 56%. So this is a reason that we see a need to improve the Beltway.

Too much information. Wilkinson's explanations are to the point, but he's starting to talk in statistics and jargon ("merge-weave lanes," "inconsistent lane configurations"), which is not the language that would appeal most effectively to his audience right now.

Third, we see a change in trip habits and increased traffic volumes. By this I mean there is an increase in the suburb-to-suburb trip, and the number of linked or combined trips. A linked trip is when you leave the office in the afternoon, or the store, or wherever your workplace is, and on the way home you stop at the dry cleaner's or the grocery store or the day care, and then finally end up at home. That's a linked trip. Instead of going from work to home.

We see increases in traffic volumes being projected over the next 20 years. And by 2020, if nothing is done on the Beltway, our traffic models and engineers tell us that we could expect 18 to 20 hours of congestion on the Beltway in that year. So in 2020, 18 to 20 hours a day would be congested on the Beltway.

The fourth reason we see that there's a need to improve the Beltway is, there's a constrained regional roadway network. By this I mean that the roads in the area [unintelligible] are constrained. There are a few alternative routes in the corridor. There is little additional capacity planned. So there is a constraint there. The Beltway is the main street of Fairfax and is handling most of the traffic.

I appreciate that Wilkinson has explained the rationale in such depth. But I'm concerned that he's already losing his audience. There's no need to keep using planner-speak terms like "constrained regional roadway network" when he can as easily say "there aren't many other roads so the Beltway needs to be able to handle a lot of traffic." Also, he's

just given four good reasons why something needs to be done about the Beltway, but hasn't created the emotional link he could by adding that there may also be good reasons (like neighborhood impact) for not expanding the Beltway even if VDOT eventually decides to do it. Maybe he'll reach that point later.

Now I'd like to talk to you a little bit about the history of the study. We started what's called a major investment study, and the acronym is an MIS, back in 1995. And this study was initiated to look at the entire 22 miles of the Beltway. The purpose of the MIS was to refine the region's long-range transportation plan. And by doing this we hoped to lead to decisions on the design concept and the scope of the investment.

Now the Capital Beltway MIS looked at about 20 different strategies to identify very specific ways to reduce the congestion, improve operations, and enhance safety. Now some of these things that we looked at included what's called traffic management measures, which would be things such as increased enforcement, motorist assistance, optimization of traffic patterns, on the intersecting roadways. So we would do things to signal timing, that type of thing, to make things move quicker and better. Other measures included things such as use restrictions, where we would restrict trucks on particular lanes; rail and bus transit; and then various roadway improvements such as improving interchanges, doing double decks in certain areas, adding additional capacity, and then adding new or removing existing exits or entrances.

The MIS evaluated and concluded an analysis of the benefits and the costs of these strategies, and included regional mobility, the social, economic, and environmental effects, safety, operating efficiencies, land use and economic development, and financing.

This is a succinct summary of a very complex process.

Out of the MIS, two recommendations emerged. They were, one, that VDOT should implement roadway improvements that would support high-occupancy vehicles and bus transit use within the Beltway. The MIS recommended us to look at a 10-lane and/or a 12-lane roadway configuration along the Beltway. The MIS also suggested that transit agencies or a multi-jurisdictional team should evaluate and study the potential for rail transit on a regional level.

This is accurate. But does it speak directly enough to this audience? I again feel that it would help Wilkinson's cause if he would even mention briefly how (if at all) the MIS addressed the concerns he knows that these residents have.

Right now we're in the second phase of this study. Again, the first phase was a major investment study. The second phase is the preliminary engineering, the environmental review for these roadway improvements. All of this began this past July. The study area for our phase extends about 13 miles. It starts at Heming Avenue [VA 2652], which is the western limit of the Springfield interchange, and it extends up to the American Legion Bridge.

Now, our study is looking at this section, and you should know that improvements to the other section, such as the Wilson Bridge and the Springfield interchange, have had their environmental documentation completed and are currently in the design phase.

That was a clever strategy. With that statement, Wilkinson takes two related hot-button issues off the table. If anyone asks, in the questioning session, about the Wilson Bridge or the Springfield Interchange, two reconstruction projects proceeding concurrently, he can repeat that those are at a different stage of their respective processes and should be addressed separately.

Since July we've initiated our federal environmental review process. We formed a study team. And the study team is made up of the Federal Highway Administration, of course VDOT, the Department of Rail and Public Transportation, Fairfax County Department of Transportation, and MWCOG. Now the Northern Virginia Transportation Commission and WMATA have also been key members of our meetings and our team, and have helped us a lot in developing the process to this point. We've initiated an early agency review process. By that I mean, we went to the federal and state agencies early, last year, and told them what was being evaluated, and started to receive their input.

Wilkinson reassures us that Fairfax County is represented on the environmental study team, so it's not just outsiders making the decisions. But I notice that six of the seven agencies he lists are transportation-related, and transportation agencies, especially in Virginia, have a dubious record with some of the public with respect to the environment. Since environmental considerations are a real concern to people in the room—and Wilkinson knows it, because he's heard it before—it might help if he

explains how and why (or why not) non-transportation representatives are contributing to making sure the environmental impacts of the Beltway process are appropriate.

We developed interchange improvement concepts. By that, I'm referring to the boards up here on my right that we showed this past fall. We've started on the configuration of the main line, and we've started looking at access points for HOV. Last fall, as I said, we held a series of three citizen workshop meetings in the middle of November, one up in this area, one in the central area of the corridor, and then one in the southern area.

The study team right now is working on the refinement of the alternatives that will be evaluated in our environmental document. We've defined these alternatives as the no-build alternative, transportation systems management, and then build alternative. I'm going to talk to you about those now.

This is a clear introductory outline of the alternatives, easy to understand. In his explanations of each, will he address the social impact, or focus strictly on engineering?

What is a no-build? A no-build alternative assumes that nothing is done on the Capital Beltway. It also assumes that everything that's in what's called the constrained long-range plan is accomplished. There are many, many things in that plan. So we make the assumption that all of this work in the long-range planning is done, but nothing is done on the Beltway. It includes, and it serves as our baseline by which we compare all the other alternatives. So if you do nothing, or you do something, you have that comparison to show in the environmental document.

Wilkinson has just told us that one of three alternatives is to do nothing. But he didn't add that several years ago, VDOT decided that this was not a viable option, and is only being used as a basis for comparison (as he notes). This seems misleading; in reality, there are only two sets of alternatives on the table, but I don't know if anyone knows that besides me. He also doesn't mention the obvious social effects of a no-build alternative, which would be that no one has to worry about encroachment in their neighborhood.

Another alternative we're evaluating is called transportation systems management. We call that TSM for short. What this action includes is improvement of traffic operations, and it maximizes the efficiency of the

existing roadway network. It looks at things such as an enhanced regional bus system, with nothing on the Beltway. Improvements to Gallows Rd. and Backlick Rd. And then things such as new turn lanes, retiming of the traffic signals, and those types of things that again help to improve traffic flow and efficiency.

The third set of alternatives that we look at are what we call the build alternatives. Now, these alternatives include various interchange concepts, and then generalized concepts along the mainline road. They look at HOV access, and all of that type of thing that we'll build into our build alternatives. Some of the things that we're considering as we develop these alternatives include, again, modifications to the mainline roadway, improvements to the interchanges, and new HOV and express bus access. Right now, we are in the middle of developing and refining these build alternatives. We've seen a number of ways that we can accomplish this, a number of ways we can improve the interchanges, and many ways to add access.

What you've seen in these graphics is, generally you'll see the large map is an aerial photo of the existing interchange. And then around it you'll see the smaller squares that represent concepts for what could be done to provide the movements that are necessary for traffic to make, and accomplish everything that needs to be accomplished.

All three alternatives are now out, with no mention of social impacts. Wilkinson has failed to connect his engineering discussion with the lives of the people to whom he's speaking. These are not drivers who want to know how traffic will be improved, or engineering buffs interested in TSM strategies. These are community residents who want to know what Wilkinson's employer is going to do to their neighborhoods.

And these are all ideas. None of these are definite things that are going to be done. We've put on the boards our best ideas to this point. We've looked at many other concepts. They have not been displayed because they don't do as good a job as these do. We do have a number of things that we've evaluated. So you take a look at these and then give us your input on that.

The eliminated concepts "don't do as good a job as these do" at what? Would they be less effective at improving traffic? More environmentally destructive? Wilkinson is glossing over the criteria used to select the few options which the public now has a chance to comment on.

Again, I want to emphasize that we are looking at a 10-lane facility and a 12-lane facility. And some of the possible configurations that we would have of these would be a 10 lane with concurrent HOV. What that means is the HOV lane is just striped, so you could slide in and out of the HOV lane at any point. A 10 lane express/local with HOV, a 12-lane barrier-separated HOV, and a 12-lane express/local with HOV. These are all ideas that we're looking at and evaluating in the environmental document.

Again, this is accurate and informative, but what's probably more important to these people is what they can read in the Washington Post: that the 12-lane "facility" (another unnecessary planning term) would entail land condemnation for additional right-of-way. Wilkinson is doing what my students often do, offering detailed description of his subject but omitting the analysis and significance of whatever he's talking about.

The build alternatives will facilitate and enhance HOV and express bus use. The potential new express bus routes on the Beltway, and the potential new locations of the Park & Ride lots at the major origin and designation points, will be identified. Connections to existing and planning rail transit lines will be identified. Future bus operations will be evaluated to determine potential ridership and effectiveness in improving mobility within the corridor. Implementation of express bus transit would be the responsibility of regional government, local government, or a transit provider.

Now let me tell you what we're doing right now on the study team. We're evaluating the conceptual interchange designs that you've seen before, we're looking at the roadway configurations and the HOV access points, we're looking at all this, and we're considering what the engineering feasibility is, what the operational performance is, and what the general environmental impacts are. The most effective of these concepts will be combined into what we're calling end-to-end alternatives. These will be carried through the environmental process and evaluated in that document. The no-build, the TSM or transportation systems management, and the build alternatives, will all be displayed at our next set of citizen information meetings which we hope will be held sometime by the middle of the year.

Again, Wilkinson spells out the concerns the study team is considering: engineering, operation, and general environmental impact. This far into his speech, it's clear to me, if not to all the people in front of me who I notice are listening intently without smiling, that Wilkinson's study team is not looking in any serious way at what their solutions

will mean to these individuals, and that he's not about to bring that up. He could still save face by acknowledging that social impacts will exist and by explaining why the study team is not focusing on them, but I doubt at this point that he'll do even that.

Each of our build alternatives will have a consistent mainline configuration, either a 10 or a 12 lane. By that I mean we'll have a 10 lane from start to finish or a 12 lane from start to finish. We won't jump back and forth. The area from the Dulles Toll Road to the American Legion Bridge will be our transition zone back into Maryland. So we won't have 10 or 12 lanes going right up to the American Legion Bridge and stopping. There is a transition provided to narrow that facility.

I want to talk to you a little bit real quickly about the environmental review process. You heard the term NEPA mentioned earlier, the National Environmental Policy Act. That federal law requires that a formal process be followed. It requires that we identify alternative ways to meet the purpose and need of the improvements. It evaluates the potential impacts and the operational performance of each of these alternatives, and it communicates the potential impacts to the public and the decision makers before a decision is made.

I expect that ~~the~~ audience will be concerned about environmental as well as social impacts. Wilkinson helps his cause by introducing the topic before being asked.

Right now the study team is working to refine and further define the alternatives, as I said earlier. And the goal of this environmental review process is to identify solutions that balance the need to improve the road while minimizing the impacts to the adjacent communities and the environment.

There, for the first time, he mentions "impacts to the adjacent communities." Where was that before? Even here, he depersonalizes the issue by failing to connect it explicitly to his audience, perhaps by adding "the communities in which some of you live and work."

A detailed environmental assessment will be prepared. This environmental assessment will be prepared to evaluate the effects of building and operating the proposed roadway. It will evaluate the effects of each of the alternatives, including doing nothing, upgrading the parallel roadways, TSM, and of course the build. There's a wide range of issues that we'll be addressing in the environmental assessment: things such as traffic and safety, land use and economic development, neighborhood character and cohesion, community

facilities and services, property acquisition and displacements, parklands, water resources, air quality, noise, biological resources, historic resources, visual and aesthetics, and construction-related issues.

I'm disappointed. For at least the second time in his speech, Wilkinson intentionally equivocates and gives only half the story when he knows his audience wants the other half. I'm aware, from attending the public workshops and from speaking with neighborhood activists, that some residents are upset that VDOT plans to run only a less rigorous environmental assessment (EA) and not a more comprehensive environmental impact statement (EIS) process. VDOT has fielded this question before, and Wilkinson is sure to get it tonight (which he later does). What does he stand to gain by omitting from his speech an explanation of why VDOT has chosen to take this now-controversial step? His explanation may not satisfy the audience; but by omitting it altogether, as he has already done with other controversial aspects of the process, he has given the impression that VDOT is trying to sweep any controversy under the table.

Finally, let me talk a little about the schedules. The several alternatives that will be analyzed in the environmental assessment will be shown at the next set of citizen workshops, sometime hopefully in late spring of this year. Then the draft environmental assessment will be prepared, and that will document the operational performance and the environmental impacts of all the alternatives. After the draft EA is completed and has been made available to the public, a location public hearing will be held. We hope that will be sometime in fall of this year. After the location public hearing, a transcript of that hearing and other supporting documentation such as the environmental assessment will be provided to the Commonwealth Transportation Board for their consideration and adoption of an alternative.

The final environmental document will detail the decision made by the Commonwealth Transportation Board. It will summarize the key issues and the pertinent information that was received from the public hearing process. It will address comments that were received on the process and from the process, and will document the commitments and the mitigation measures that have been made for the project. After the federal environmental approval, after the signature from the Federal Highway Administration, only then could final design begin. Then construction of any improvement would be staged. People

have thought that we'd start building this 13 miles at one time. That is not the case. More than likely, the I-66 and 495 interchange would be one of the first areas to be developed in the construction.

That's the spiel. If you have any questions, I'd be happy to try to answer them.

Wilkinson has concluded with more description. Once again, his audience knows what VDOT's plan is, but not how it will affect them. He has succeeded in keeping his speech brief, but at the expense of telling the people in the room what they really want to know. I expect that the question session will make this clear very soon.

It does. Before she even allows questions, Kate Hanley, who is chairing the meeting, gives Wilkinson a chance to pre-empt some of the many concerns he didn't address, by asking him to elaborate on public hearings, the role of rail transit, the process of land and right-of-way acquisition, and sound barriers. But in his answers, Wilkinson in some cases alienates his audience even further. In the first place, sound barriers, for example, do not enter the evening's conversation until Hanley introduces them at 8:25, 55 minutes into the meeting, yet they are probably the foremost concern for some of the people sitting here. And even then, Wilkinson's response to what his audience should know about sound barriers is loaded with technical terms and does not address in clear language what residents can hope for in that context:

Hanley: What happens with the sound barriers? Do they get automatically put in? Does nobody consider them? Do they want it? Do you know? Tell us about sound barriers.

Wilkinson: As part of the environmental document, a complex detailed noise analysis will be conducted that will evaluate the amount of noise that's being generated now and in the future by the facility. It will identify where specific receptors are that are impacted. It goes through a very complicated modeling process and does that identification and evaluation. The department has a statewide noise policy. If you're impacted and you fall within the criteria set by that policy, then we will provide noise attenuation barriers to you, and hopefully be able to mitigate the impact that's caused. [Emphases added to

indicate technical terminology]

Hanley: I get lost in receptors and attenuation. Can you be a—can we do this a little more in English?

What Wilkinson is saying does matter. Virginia is prepared, he tries to explain, to provide sound barriers to help residents living near a highway. But when he fails to speak the same language as his audience, the message is lost. From what I'm hearing, I sense two deficiencies in VDOT's process: social impacts are not at or toward the front of this Beltway study, and VDOT is not skilled at communicating effectively with its state's residents even when trying to tell them things they might want to hear.

Both of these points are reaffirmed during the questions which follow Wilkinson's speech. Person after person stands to ask not about the process Wilkinson described, but about the issues he either omitted, glossed over, or spoke about in jargon. A leader of a McLean community association requests that VDOT "clarify the extent to which our inputs are considered in critical Beltway design decisions" (a point Maryland officials seem to have communicated to its residents, but which Wilkinson avoided entirely) and "work with us to resolve the issue of home salability" (also left untouched in the speech).

Another local resident, as I anticipated, notes that Wilkinson "mentioned earlier the environmental assessment. You did not mention an environmental impact statement. . . . Could you address . . . if there is any form of citizen input whatsoever that would induce VDOT to conduct an EIS?" Rather than correcting his earlier omission by patiently explaining the situation, Wilkinson exacerbates the tension by taking a defensive stance and throwing the question back: "I've answered that numerous times [previously]. But I'm going to be a little unfair, and I'm going to ask you one question,

sir. What is it that you think you would get out of an environmental impact statement that you will not get out of an environmental assessment?" Wilkinson has every right to be impatient at being asked a question he's fielded repeatedly at other meetings. But by avoiding the issue in his formal speech, he set the stage for a follow-up question, and by dodging the query even now, he adds to the audience's sense that VDOT is making key decisions without feeling the need to explain itself or consider legitimate alternatives, whether or not this is actually the case.

As the questioning progresses, murmurs in the room grow louder. It's clear that many of the people here are very upset—not slightly concerned, but very upset—about what Wilkinson has said and not said, and about how they feel he and other VDOT representatives (who have fielded some of the questions) are responding to them. One woman, in an angry tone, asks: "Will future meetings be scheduled on weekends, so people can attend? A school night or work night is unacceptable. It reduces discussion. It reduces interchange of ideas. . . . Is this expansion already a fait accompli or will VDOT hear us when we say, no." The audience breaks into applause; cheers ring from around the room.

The loudest reaction of the evening comes during a woman's comments about her community's fears regarding what Beltway widening would mean. If I knew only what Wilkinson had included in his presentation, I would have no idea why this woman was so upset. He gave no indication at all that people might be significantly affected by the plans he described in such detail, or even that anyone had concerns about them. But there is no mistaking the passion in this impromptu speech:

My neighborhood . . . was taken by surprise with all of this. We found out about it recently, surprisingly, given the impact it will have on us. So we're still in a

shock phase, if you will. [We'll] come to decisions about how we're going to fight this or change this or whatever, and we're going to form our own task force. However, I will tell you, we'll be extremely active on this issue. We'll have serious demands. [pause] I mean [pause as her voice begins shaking], this is a process that can't be railroaded down the citizens' throats. [Loud applause from the audience. One woman shouts "Yeah!"]

Leaving the meeting after the question session, I have the sense, which I later confirm upon listening to my cassette and typing out the transcript, that Wilkinson and the other VDOT officials did not once offer a clear, non-technical, and direct response to any question from the audience. They did clarify some of the issues raised, but only with the help of mediation questions added frequently by moderator Kate Hanley.

Two years later, I met with a senior-level civil engineering class studying pavement design at the University of Maryland in College Park. I put the Wilkinson case to the students, offering examples drawn from the McLean meeting and from written comments which I introduce below. Why did this public meeting go so wrong, I asked. Is Ken Wilkinson to blame? The students sympathized with Wilkinson: as an environmental planner, he should not be expected to be fully competent in public communication skills or mediation. At the same time, they felt that in a context like that meeting, members of the public need a public official who will meaningfully address their concerns (even if the state agency decides not to act on them) and who can communicate effectively to and with them. Someone should be doing that, in other words, but it should not be Wilkinson, who in effect is working outside his field. In that sense, VDOT is culpable for not structuring itself in a way that more effectively fulfills its constituents' needs.

Why does it matter? For one thing, at least some Virginia residents believe that highway officials are not responsive to their concerns and are not giving the residents a meaningful role in the planning process; for another, even if those fears are unfounded, VDOT officials are apparently unable to communicate effectively enough to say so. VDOT engineer Bahram Jamei proudly told me about the thick volumes of collated written comments collected at the public workshops, using them as evidence that the public plays an important role and is comfortable in communicating their concerns to VDOT. But when I read through those volumes, I found dozens and dozens of angry letters accusing VDOT of being secretive, unresponsive, and unsympathetic to residents' concerns. VDOT's own summary of comments received at the June 1999 workshops alone included 26 categories of concerns relating to the environment (including 41 comments about minimizing impacts to adjacent communities) and 25 categories of concerns related to public involvement (including ten people under the category of "VDOT does not listen to or take into consideration what the public says" and seven under "Expand opportunities for public involvement in planning and decision-making process"). Eight people submitted comments pointing out what was entirely absent from Wilkinson's speech and what was also not addressed to their satisfaction at the public workshops: coordination with Maryland.⁴¹²

From these collected comments and from the McLean meeting, I see parallels between the ongoing Beltway study in Virginia and the planning process which so upset

⁴¹² Virginia Department of Transportation, Capital Beltway Study: Summary Report, Citizen Workshops, June 8, 9, 10, 1999, vol. 1 of 3, pages 2-15 through 2-17. I do not claim, however, that Maryland local and state planning authorities are necessarily any more effective at initiating coordination with Virginia.

Paul Foer, Lisa Loflin, and Neal Potter 40 years earlier in Maryland.⁴¹³ Those individuals were not as upset by the physical effects of the Beltway as by the ways in which highway and political officials dealt with them regarding those effects. In Virginia, residents are upset over what the proposed Beltway widening may do to their communities and to the environment, but they are also angry that VDOT officials seem unwilling to even acknowledge and enter into dialogue about those potential effects. As in the earlier case, a different philosophical approach from VDOT, a willingness to consider nontraditional alternatives, and more effective and sympathetic communication could go a long way toward changing how residents view the planning process and its results—even if those results are similar to what they would have been anyway.

As it is, those residents who feel excluded from VDOT's study and consideration are unequivocally angry. These letters, on public record, clearly indicate how their writers feel about the current planning process:

It seems this is just a process + you don't care what we think. It's symbolic.

⁴¹³ For more on the Virginia public workshops than I have provided here, see HNTB Corporation, De Leuw, Cather & Co. of Virginia, and JHK & Associates, Capital Beltway Study: Major Investment Study Phase Results Report, January 1997 (Virginia Department of Transportation, 1997); Virginia Department of Transportation, Capital Beltway Study: Summary Report, Citizen Workshops, November 17, 18, & 19, 1998, 2 vols.; Virginia Department of Transportation, Capital Beltway Study: Summary Report, Citizen Workshops, June 8, 9 10, 1999, 3 vols.; Michael D. Shear, "Panel Seeks More Study on Beltway," Washington Post, 27 April 1999: B4; Alan Sipress, "EPA Still Wants Full Study of Plan to Widen Beltway in Va.," Washington Post, 20 May 1999: B1; Michael D. Shear, "A Bigger Beltway? No Way, Say Activists," Washington Post, 9 June 1999: B1; and Michael D. Shear and Eric L. Wee, "In Fairfax, Gearing Up for a Beltway Battle," Washington Post, 13 June 1999: C1. An earlier proposal for Beltway improvements, elements of which were folded into the late-1990s planning process, appeared in JHK & Associates, Capital Beltway Study, I-95/I-495 Northern Virginia: Final Long-Term Recommendations Report (Virginia Department of Transportation, 1991).

Please take us seriously. (K. Wilke, Annandale)⁴¹⁴

Please get someone other than Wilkenson to manage this project. He is insensitive to homeowner concerns and does not comprehend that as a state employee, he works for me and every other homeowner/resident impacted by this absurd proposal. (C. Bright, Falls Church)⁴¹⁵

When my wife saw all these proposals, she cried. Our beautiful new home we bought in March will probably be destroyed. Thank you for ruining our lives! (C. Walsh, Falls Church)⁴¹⁶

The fact that you would even consider ruining so many people's lives and destroying the security they have worked years and years in order to make it more convenient for commuters absolutely maddens me. Why are commuters' rights more valuable than mine and those of my neighbors?

I think VDOT is completely unresponsive to the destruction you are causing in people's lives. If you want to build this kind of monstrosity then you should be prepared to offer compensation to those whose homes will be within 200 feet of the highway—not just those whose house you take—they are the fortunate ones. I am a widow who has serious health problems. I can't afford to move because houses in this area are so expensive + mine probably wouldn't sell. I truly feel that I am being raped by VDOT—no, worse. Victims of rape actually have some rights—unlike victims of VDOT. (J. Murphy, Falls Church)⁴¹⁷

⁴¹⁴ Virginia Department of Transportation, Capital Beltway Study: Summary Report, Citizen Workshops, June 8, 9, 10, 1999, vol. 2 of 3, comment #63.

⁴¹⁵ Ibid., comment #61.

⁴¹⁶ Ibid., comment #73.

⁴¹⁷ Ibid., comments #259 and #60. This is not the only time angry residents have used such strong terminology to condemn VDOT. In late 2001 and early 2002, recession-strapped Virginia officials rescinded hundreds of millions of dollars in funding for planned transportation projects statewide. Joe Pash, who had already spent \$200,000 to relocate his Prince William County dentistry practice on orders from VDOT, learned that the road improvements planned to pass through his old location were indefinitely postponed, as was the state's reimbursement for his moving costs. "Now it looks like I'm going to have to pay for this," Pash told a Washington Post reporter. "I feel a little raped." See Steven Ginsberg, "The Road Project Not Taken," Washington Post, 22 February 2002: B3.

In Chapter 5, I explained how Lisa Loflin and her family, whose Silver Spring house stands adjacent to the Beltway, could have avoided the frustration of an unresponsive highway bureaucracy if only their real estate agent had been truthful in telling them that a highway would be built next to the property they were about to buy in 1960. One angry Northern Virginia resident, writing to the commissioner of VDOT in 1999, suggests that this deceptive practice continues four decades later, yet again placing unwitting new home buyers in proximity to the Beltway. But in this case, the details make clear, VDOT and the seller effectively colluded, and were equally responsible, for the deception:

[M]y wife and I purchased our new home roughly nine months ago. We were very cautious in our decision since this was the home that we would raise our children in (if we are so lucky). We selected our community for its proximity to the metro, major interstates, the bicycle trail, the metropolitan DC area, and Tysons Corners. Of equal importance was the fact that we were not directly against the interstate and were separated by a buffer-zone of woods. Before we purchased, we checked with our real-estate agent and the builder's agent about any plans to expand the proximate interchange. We were subsequently assured that there were no such plans. But, as time would soon tell, the plans were well underway and soon to be revealed in public hearings. "Conceptual plans" were apparently unveiled several months ago showing my neighborhood; well not really since the aerial photo underlying these plans is from 1995 and thus my new community is not depicted. (W. Colligan, Dunn Loring)⁴¹⁸

It is important to note that in the face of all this anger, and despite these many letters to the contrary, VDOT has made real progress in incorporating the public into its planning process. Virginia, like most if not all states, had through the twentieth century intentionally developed "a professionalized and politically insulated Highway Department, which was able to reduce transportation decision-making to a computational problem. Disagreements about outcomes and cause and effect were

⁴¹⁸ Ibid., comment #250.

resolved within the department, and engineering solutions were imposed on most transportation problems."⁴¹⁹ Initiatives by Governors Charles Robb and Gerald Baliles in the 1980s explicitly attempted to increase the power of citizens (and legislators) in the transportation planning process; the current Beltway study draws on those efforts as well as on federal legislation. Some Northern Virginia residents recognized this shift even as they voiced their concerns in 1999:

Gary Deal and B.J. O'Sullivan were wonderful at the Right of Way table [at the public workshop]. They were very kind and positive in giving us the "what if" information. (L. Robey, Falls Church)⁴²⁰

I applaud the attempt by VDOT to involve local communities in the process of determining a reasonable course. This is a welcome change from history. (R. Renfro, Falls Church)⁴²¹

But involving the public has not been enough. The majority of the comments from the public workshops and the concerns expressed at the McLean meeting agree in sentiment with the Northern Virginia resident who told me that "VDOT doesn't have any public involvement process. VDOT now has a process in which they tell the public what they're up to."⁴²²

Both VDOT and the public have legitimate cases, and this leads to what I call the Old Dominion Paradox. When engineer Bahram Jamei tells me that VDOT can be proud of its progress in giving the public a role in the transportation planning process,

⁴¹⁹ Bowman, 16.

⁴²⁰ Virginia Department of Transportation, Capital Beltway Study: Summary Report, Citizen Workshops, June 8, 9, 10, 1999, vol. 2 of 3, comment #77.

⁴²¹ Ibid., comment #44.

⁴²² Interview with *Leslie Shulman, December 20, 2000. This individual asked to otherwise not be identified.

he is right. When angry McLean residents claim that VDOT is not giving them a meaningful role in the transportation planning process, they are right too. The two arguments are not mutually exclusive.

Both inclusion and exclusion are at play here. VDOT officials believe that state residents are now included in the transportation planning process, which even recently was not the case. The current process is inclusive in that sense; VDOT has consciously revamped its own culture, dating back nearly a century, to provide access to and an ongoing role in the planning process to state residents. Yet those residents continue to feel excluded from the process because they want a different type of access than VDOT is offering; they believe that VDOT does not acknowledge their concerns or give them a significant enough role. This tension is manifested in the conflict in rhetorical styles I witnessed, between VDOT (as seen in Wilkinson's speech, whose growing impatience was likely due to frustration that his audience could not appreciate the participatory role VDOT was offering them) and Northern Virginia residents (who wanted to hear Wilkinson speak in more sympathetic and considerate ways, and to have a different kind of role in the planning process). VDOT is simply not speaking the right language to communicate effectively with residents, as my analysis of Wilkinson's speech and the following excerpt from a 1999 letter from a Dunn Loring couple to the VDOT commissioner make clear:

We have been shocked by the blithe dismissal of our situation by the VDOT employees who have had an opportunity to respond to questions about it. The houses directly impacted by the proposed changes to the roadway are referred to as "facilities." What an easy way to dismiss the human impact this kind of project has on a community! VDOT, regardless of the lives affected by this proposal, has declared that these new roadways will have "no significant impact" on the adjacent communities. It is stunning to witness how inhumane this system is and the ease with which it dismisses the time,

money, and emotion committed by residents to turn their houses into homes and their neighborhoods into communities.⁴²³

The ICF Kaiser Consulting Group reached a similar conclusion in its 1998 assessment of public involvement in transportation planning in the Washington area, conducted for the Metropolitan Washington Council of Governments. ICF Kaiser studied the extent of public involvement and satisfaction of all relevant parties, focusing on several specific major investment studies including the two Capital Beltway studies I have discussed in this chapter. Echoing my own observations, the consultants concluded that "[t]here is no shared or common understanding regarding the meaning or practice of public involvement between members of the public and transportation decision-makers" in Virginia, Maryland, and Washington. In particular, the consultants note, many people without decision-making authority view public involvement as a participatory exercise, while many transportation officials view public involvement as consultative with less direct input into the creation of plans and projects.⁴²⁴

In studying highway protest meetings which took place in the Boston area in the 1960s, Gordon Fellman has concluded that the public participants gained more in cathartic respects than they did in actually affecting policy. At protests and at public hearings, Fellman argues, residents had a role to play; but it was effectively only an emotional one, or, in ICF Kaiser's terms, a consultative one: "Anger, impotence, and frustration are vented verbally and harmlessly, in the company of like-minded neighbors

⁴²³ Virginia Department of Transportation, Capital Beltway Study: Summary Report, Citizen Workshops, June 8, 9, 10, 1999, vol. 3 of 3, comment #256.

⁴²⁴ ICF Kaiser Consulting Group, Assessment of Public Involvement in Transportation Planning for the Washington Metropolitan Region (Washington: Metropolitan Washington Council of Governments, 1998), IV-2.

and sympathetic outsiders. . . . In this sense, the protest meetings may be therapeutic for the protestors' personalities but do not help in pursuing the protest movement's aims."⁴²⁵

Virginia's current process seems to cast residents in a similar role: engineers and planners will allow them and even encourage them to speak, vent, and offer suggestions, but then do not follow through in clearly and meaningfully incorporating those frustrations and suggestions into the actual planning; the public's role is distinctly consultative rather than participatory. Paradoxically, VDOT's planning process, as the twenty-first century begins, is both inclusive and exclusive, to no one's satisfaction.

The relationship in Maryland between planners and the public did not seem to strike such tension, despite ICF Kaiser's findings which encompassed transportation planning processes in that state. Based on my observations at the public workshops, my interviews of planners and officials in both Maryland and Virginia, and my examination of primary and secondary documentation, I believe this contrast is based both on at least two key factors. One is the difference in broad underlying philosophies, as noted earlier in this chapter. These include each state's overall approach to transportation planning: while Maryland's recent emphasis on "beyond the pavement" solutions welcomes competing proposals and visions, Virginia's consistent focus on road-building and expansion as primary solutions means that suggestions from non-professionals are not as useful because the largest questions have predetermined answers.

In addition, the tension is powered by competing views of what planners themselves should be expected to do. Ernest Alexander has outlined a series of roles

⁴²⁵ Gordon Fellman, "Neighborhood Protest of an Urban Highway," in Transport Sociology: Social Aspects of Transport Planning, ed. Enne de Boer (Oxford: Pergamon Press, 1986), 37.

which planners assume, often concurrently, including technician-administrator, mobilizer, mediator, entrepreneur, and advocate. In the 1950s and 1960s, planners and highway officials in both states adhered most strongly to the technician-administrator role, in which they serve as theoretically non-partisan technical experts catering to elected officials who make the final decisions on roads, land use, and other issues. In Virginia, planners continue to follow this path most strongly; at the McLean meeting, this was indicated by planner Wilkinson's repeated use of technical jargon and the audience's frustration that he was not speaking to their concerns.

But in Maryland, in more recent years planners have shifted to also serve more as mediators, bridging the gap between elected officials and their constituents by explaining the concerns of each group to the other and, optimally, by combining interests within and between both groups to form a mutually understanding coalition. The mediating planner, in other words, is responsible for ensuring that the planning process is dialectic.⁴²⁶ In Virginia, the public's written and oral comments and questions suggest that the process is not reciprocal in this way: VDOT planners are explaining VDOT's concerns to the public, but are not satisfactorily explaining the public's concerns to elected officials, and certainly are not building a mutually understanding coalition. The civil engineering students spoke to this point in arguing that Wilkinson—a planner—should not have been expected to communicate and mediate effectively. In their minds, and apparently from the VDOT perspective, planners continue to play primarily the role of technician-administrator.

⁴²⁶ Ernest Alexander, Approaches to Planning (Philadelphia: Gordon and Breach, 1992), 107-108.

Over five years into the most recent Beltway studies, it appears that the Beltway in itself is not a powerful enough stimulus to close the gap between widely divergent ideological approaches in Virginia and Maryland.⁴²⁷ Each state's officials continue to apply transportation strategies rooted in their respective cultures, without bowing to the other. Each similarly runs its transportation planning process in ways which inspire very different reactions from the public; those reactions are in large part a response to the impending effects of the contrasting congestion solutions (e.g., additional lanes expanding into existing communities). Only with respect to the physical bridge between the states—the Woodrow Wilson Bridge—have the states been able to churn out an agreement for dealing with the ideological bridge, and even there Maryland and Virginia officials continue to clash on various subjects while long-delayed bridge

⁴²⁷ Although in this discussion I have used "Virginia" and "VDOT" almost interchangeably, it would be misleading to suggest that Virginia planning and political officials share a monolithic approach to transportation and land-use decisions. I refer to the philosophy which has carried the day. Still, there are tensions within the state, particularly between mostly urban Northern Virginia (whose officials have argued to some extent for increased local autonomy and new transportation solutions) and more rural areas.

On these schisms and on tensions within VDOT, see R.H. Melton, "Gilmore Aims for More Efficient Road-Building Agency," Washington Post, 15 September 2000: B8; R.H. Melton, "Gilmore Outlines Repairs for VDOT," Washington Post, 14 December 2000: B7; Craig Timberg, "Va. Transit Funds Called Billions Short," Washington Post, 20 December 2000: B7; Craig Timberg, "Lawmakers Differ on Taxes for Va. Roads," Washington Post, 16 January 2001: B1; James A. Bacon, "Northern Virginia Made Its Own Traffic Mess," and John T. Hazel Jr., "The Roadblocks Originate in Richmond," Washington Post, 21 January 2001: B8; Lisa Rein, "Road Rules Reveal Split in Virginia," Washington Post, 22 January 2001: B1; Craig Timberg and Michael D. Shear, "Fairfax Wants Transportation Plan Delayed," Washington Post, 23 January 2001: B1; "A Move to Get Moving" [editorial], Washington Post, 27 January 2001: A18; and Katherine Shaver, "VDOT in Bad Shape, Study Finds," Washington Post, 14 November 2001: B2.

reconstruction progresses in 2001.⁴²⁸ But otherwise, as AAA official Lon Anderson noted in 2000, "the two states don't speak the same language. It could really have a

⁴²⁸ The Wilson Bridge deserves much more extensive study than I offer here. Following are a few introductory references for different aspects of the project to replace the aging bridge, continuing through 2001. For overviews of the project and the many dynamics involved, see Alice Reid and Stephen C. Fehr, "The Rush Hour of Decision on Replacing Wilson Bridge," Washington Post, 26 April 1998: A1; Dana Hull, "Water Under the Bridge," Washington City Paper, 26 February 1999: 24-29; and Connections [newsletter produced by the Woodrow Wilson Bridge Center], 20 issues through Spring 2001.

For conflicts pitting Maryland and Virginia against the federal government (which owns the bridge), see Don Phillips and Alice Reid, "Clinton Proposes \$175 Billion Road Bill," Washington Post, 13 March 1997: A4; Alan Sipress, "Md., Va. Decry Cuts in Plan for Wilson Bridge," Washington Post, 9 June 2000: B8; and Alan Sipress, "Wilson Bridge Deal Emerges on Hill," Washington Post, 29 July 2000: A10.

For an example of consensus between Maryland and Virginia, see Katherine Shaver, "Va. and Md. to Co-Own New Wilson Bridge," Washington Post, 30 May 2001: B1. For conflict between the states over budget issues, see Alan Sipress, "New Rift Over Wilson Bridge," Washington Post, 23 September 2000: B1.

For the details and significance of the states' dispute over the role of union labor in the bridge's reconstruction, see Alan Sipress, "Md. to Seek Union Deal for Bridge Construction," Washington Post, 21 November 2000: B1; "Two Governors and a Bridge" [editorial], Washington Post, 28 January 2001: B6; Lori Montgomery, "Bush Plan Would Block Wilson Bridge Labor Deal," Washington Post, 17 February 2001: A1; Donna St. George, "Union Deals for Projects Are Voided by Bush Order," Washington Post, 18 February 2001: C8; Michael D. Shear, "Wilson Bridge Labor Talks to Resume," Washington Post, 14 August 2001: B1; Michael D. Shear, "Labor Ruling Imperils Wilson Bridge Coalition," Washington Post, 15 August 2001: B4; Bill Miller and Katherine Shaver, "Md. Given Go-Ahead on Bridge Labor Pact," Washington Post, 8 November 2001: B1; Katherine Shaver, "Md.-U.S. Labor Pact Dispute Delays Wilson Bridge Contract," Washington Post, 1 December 2001: B5; "U.S. Says No on Wilson Bridge Labor Pact," Washington Post, 8 December 2001: B3; and Katherine Shaver, "Bridge Job Proceeds Without Labor Pact," Washington Post, 13 December 2001: B4.

For delays in the rebuilding process caused by a single contractor's 2001 bid running an unprecedented 75 percent higher than Maryland highway officials' estimates, see Katherine Shaver, "Wilson Bridge Bid Called a 'Budget Buster,'" Washington Post,

devastating effect on tens of thousands if not hundreds of thousands of commuters who use the Beltway every day." Adds a reporter, "[s]hould the two states continue to follow these distinct paths, especially in mapping out the future of the Beltway, travelers could ultimately smack into a dead end."⁴²⁹

14 December 2001: B1; Katherine Shaver, "Md. Finds Bloat in Bid for Wilson Bridge Job," Washington Post, 15 December 2001: B7; and Katherine Shaver, "Rising Cost Jeopardizes New Bridge, Md. Warns," Washington Post, 16 January 2002: B1.

Finally, for intra-state conflicts between Virginia officials and the city of Alexandria, see Stephen C. Fehr, "Alexandrians Step Up Fight Against Bridge," Washington Post, 26 January 1998: B1; Alan Sipress and Michael D. Shear, "Alexandria Planning New Legal Challenge to 12-Lane Bridge," Washington Post, 20 November 2000: C4; Alan Sipress, "Latest Threat to New Bridge Angers Alexandria's Neighbors," Washington Post, 21 November 1998: D1; Alan Sipress, "Federal Judge Blocks Wilson Bridge Plans," Washington Post, 16 April 1999: A1; and Leef Smith and Alan Sipress, "Alexandria Eardrums Will Take a Pounding," Washington Post, 8 February 2000: B1. As of 2002, a clearinghouse of bridge-related information and documentation is online at <<http://www.wilsonbridge.com>>.

⁴²⁹ Sipress, "Beltway Collision."

CHAPTER 7

"A DEER DOESN'T STAND A CHANCE:" GOOD CALLS, BAD CALLS, 10-45s, AND THE PHYSICAL WORLD OF I-495

We've got to be out there every day to keep it clean from the debris, coming from the rubble trucks, the tractor-trailer trucks, even the public. Trash seems to accumulate everywhere. Things fall off vehicles. Everything from mufflers to equipment on tow trucks, tractor-trailers, mud flaps. You name it, it's there. —Larry Kidwell, Maryland State Highway Administration⁴³⁰

The preceding two chapters have focused on conflicts which are played out in planning and political contexts and in the personal lives of the people who live near the Beltway. However, as SHA engineer Charlie Watkins pointed out in Chapter 6, the Beltway does function fairly smoothly at the operational level, where the people who make it run must reach sufficient consensus on contentious issues to be able to work together and keep the highway in working condition. In this chapter and the next, I shift from planning issues to an approach examining the Beltway's day-to-day life.

In this chapter, applying the cultural landscape framework, I focus on the physical version of the Beltway; in Chapters 8 and 9, I will turn to cognitive conceptions of the Beltway, how it appears in the minds of the people who use and maintain it. To examine the physical manifestation of the Beltway, I explore here the three primary components of a cultural landscape as explained in the first operation—natural elements, human-constructed objects, and people. Discussions about traffic controllers and emergency response teams underscore the different ways in which

⁴³⁰ Interview with Larry Kidwell, March 20, 2001.

people interact with the landscape depending on whether or not they occupy its space, an additional path of analysis suggested in the first operation.

In studying the interactions between the people, objects, and natural components, as encouraged by the model's fourth operation, I find a common thread of danger and safety; I also explore how aesthetics, an issue raised in the model's third operation, relates to these interactions. I conclude the chapter by discussing what groups are pointedly excluded from this equation—who does not get to use the Beltway—and what implications follow from their absence. This discussion of absent components and issues of class and disability draws on suggestions in the study model's fifth operation. I begin by looking at some of the non-human natural phenomena affecting the Beltway and its users.

The Nature of the Beltway

As drivers who have skidded on rain or ice know well, the Beltway is no more immune to weather events than any other road, though highway departments may respond to those events differently with respect to the Beltway. While commuters stalled in congestion generally focus their attention on the vehicles around them and on the pavement ahead, that pavement is only as safe as it is because of engineers' responses to dealing with the natural environment of which the Beltway is a part. Finding ways to improve the Beltway, as Virginia and Maryland are both trying to do, is important but is also, in a sense, a luxury; the road needs to function in the first place before that type of concern can be given attention. And from an engineering standpoint,

former draftsman Isadore Parker suggests, "the most fundamental thing is to get rid of water," not to worry about overloaded traffic.⁴³¹

For Parker, working as an early designer of the Maryland portion of the Beltway, water came into play because of the slopes created in the construction of the road. "When you're designing the road to go through an environment that has hills and valleys and streams, and crosses other streets, and . . . is not going to have any intersections except interchanges," he told me, "you have to learn about what they call 'cut and fill.'" Cutting through a high area, he explained, creates side walls, or hills, which need to be sloped down to the road. Conversely, when sending the highway through a valley, "you have to fill that in with some of the dirt you took where you cut." Though "borrowing" dirt from an outside site is also an option, ideally the high areas and valleys match up, so that "the entire design of the road is based on that balancing out your cut and fill. And then," Parker finished, "when you build the road over the valley, then you have slopes going down toward the stream, and so you design your sewer system to catch the water right at the bottom of a hill, and then siphon it off through pipes to the nearest stream." The basic landscaping of the Beltway, then, represents the connections between rain and terrain.

Fred Pavay, who with Parker worked on the original design of the Beltway in Maryland, specialized in storm drainage and hydrology and helped develop the surface drain ditch system placed in the Beltway's median. These were open ditches covered by grates, designed for either 25- or 50-year storms. Pipes from these ditches drained the

⁴³¹ Citations in this section draw on interviews with Isadore Parker of 5 and 26 October 1998; interviews with Fred Pavay of 8, 15, and 29 October 1998; and Fred Pavay, email to Jeremy Korr, 13 December 1998.

rainfall either to nearby culverts or to "a side ditch in a cut section or a cut-off wall at the toe of the slope in a fill section." Pavay explained that "the pipe could usually carry, you might have a little water ponded in the median ditch for a while, but it wouldn't overflow. In most cases, it was kind of self-adjusting. . . . You wouldn't have a . . . washout or anything like that." Pavay recalled that outside of hydrology specialists, highway engineers were not attuned to this aspect of road design. "It's funny," he laughed, referring to the engineering teams he worked with at Michael Baker Jr. "There were engineers that were fully schooled in design, structural design, but it just had never been emphasized. These are like modern details to a structural engineer. Where are the inlets going to be placed? What size pipe do you need? . . . They just never were bothered with hydraulic design."

In Virginia, the HNTB and VDH engineers designing the original Beltway similarly paid some attention to the water on and around the road. Former engineer Robert Mannell remembered that

on the streams in particular, we had to align the stream beds to prevent erosion. How to put sedimentation into the streams themselves was a major consideration . . . The edge of the shoulders where you would direct water down the flumes and what have you to prevent erosion, those types of things were brought to bear.⁴³²

Later innovations in optimizing water quality, through providing ponds and other water collection sites, were still to come. But even during the planning stages in the 1950s, engineers in both states gave careful attention to getting rid of unwanted water from the

⁴³² Interview with Robert Mannell, 9 January 2001.

Beltway, a concern more serious in the Washington area, with its 39 inches of average annual precipitation, than in other areas such as Los Angeles with its 12 inches.⁴³³

What those engineers did not consider was how to provide water on the Beltway in situations where it would be desirable. This issue went unnoticed until 1984, when a tractor-trailer caught fire on the American Legion Bridge, broke through the guardrail, and hung over the side, leaning toward the Potomac River, as firefighters raced to extinguish the flames before the truck exploded or fell off the bridge. But once positioned on-site, the fire companies realized there were no hydrants to supply their hoses. The bridge, and the rest of the Beltway, were designed to siphon water off, but nothing was built in to provide water for a case like this. A follow-up task force stressed the need for a water supply system around the Beltway, "and that's why they have those doors in the walls," Rick Blandford of the Chevy Chase Fire Department explained. But even after the task force's report, state officials have not taken seriously this need for water. Blandford expressed his disappointment in a conversation with fellow Firefighter Timothy Bell and me:⁴³⁴

So now there's a standpipe system that actually runs--when they rebuilt the bridge back in '87 or whenever, they put a dry pipe system through the Beltway. And there's a hydrant--if you're going into Northern Virginia, if you look up in the hills there's a mansion up there. A couple big houses up there. There's a hydrant up there. And they were supposed to lay a line for the hydrant down through the woods, and then connect to the standpipe so they could pump it.

⁴³³ Borgna Brunner, ed., Time Almanac 2002 (Boston: Information Please, 2001), 607.

⁴³⁴ Citations in this section from Blandford and Bell draw from interview with members of the Chevy Chase Fire Department, 9 February 2001. For additional background on the episode cited, see Joanne Ostrow and Rosa Michnya, "Cabin John Crash Snarls Rush Hour," Washington Post, 21 July 1983: C1; and Joanne Ostrow, "Fatal Cabin John Accident Causes Classic Area Gridlock," Washington Post, 24 July 1983: B1.

And there's another standpipe where you go down the Parkway, the G.W.--on the Cabin John Parkway. And there's a connection to be connected there. Once they built that connection, the state never maintained in. Cabin John [Fire and Rescue] went up there to look at it, and it was all rusted. All the connections fell off, it was totally out of service.

Bell: Where was this at? Where was it?

Blandford: The Legion Memorial Bridge. The whole system. I think the state's working on that now.

.....

Korr: So you don't know, if you had to go tap the connection right now--

Blandford: We don't know if it works or not.

Bell: Is that right!

Blandford: We have the keys to the doors that go to the Beltway. They don't work. Station 16 right now is working on the Beltway water supply, as far as getting the keys to the state and making sure they all work. Some of the--you'll see connections outside; there's one connection on one side so you can pump through the wall. And some of those are messed up. Cause once they built it, the state never maintained it. And some of them just rotted away. . . . It was something never brought to mind, how are we gonna get water on the Beltway.

In this case and in the original concerns for dealing with hydraulic design, water is important because of its effects on the Beltway's safety and, potentially, on its infrastructure. In Washington's Metro system, where engineers planning in 1960s and 1970s underestimated this factor, water and its mineral deposits are damaging the track bed, power system, electrical components, steel girders, communications cables, and power lines at a rate far greater than anticipated.⁴³⁵ Though the Beltway's infrastructure

⁴³⁵ Lyndsey Layton, "Water in Metro's Basement: Seepage Ruining Rail Equipment in Most Tunnels," Washington Post, 13 July 2000: A1; Lyndsey Layton, "Metro Experiencing Flood of Problems," Washington Post, 19 November 2001: B4.

is different, inadequate drainage or uncontrolled water flow could still have harmful effects on bridges, supports, and other elements.

The more pressing issue for most drivers is safety; drainage systems minimize the dangers of water, but cannot eliminate them entirely. Thus Jennifer O'Keefe, an Alexandria resident, recalls that "I've hydroplaned several times – I doubt the integrity of the draining in some areas – thank goodness I didn't swerve or wreck."⁴³⁶ A resident of Radford, Va., "once watched, in my rear view mirror, as several other cars spun wildly behind me, crashing into each other, during a horrific rainstorm."⁴³⁷ This type of spinning and hydroplaning usually occurs when a thin layer of rain makes the highway surface slippery. Drivers face a different problem when the Beltway's drainage system cannot accommodate rainfall. Omid Jahanbin of Bethesda describes his experience driving on the American Legion Bridge during an exceptionally heavy rainstorm in 2000:

In the left lanes I was following an older model Volvo until it also promptly came to a stop at the lowest part of the bridge. Little did I know as soon as I came to a stop right behind him, the water that he had parted away folded together right over the hood of my car. Immediately thereafter the engine to my car made a deep gurgling sound and stopped. Three seconds later my car started to float and water began entering the inside. Opening the door was impossible because the height had reached the sill of where the window slides into the door and the force of water restricted movement. I began panicking and moved to the passenger side, rolled down the window, and climb[ed] out and into frigid, dirty water that was two inches below my chest. I tried moving to the front of the car and noticed the driver of the Volvo also get out and come towards my car. Together we pushed (actually it was more like floated!!!) my car up onto the dry incline (about twenty feet backwards) and followed suit with his car. With the little remain[ing] battery power left in my phone I called the state police and my

⁴³⁶ Beltway Survey #216.

⁴³⁷ Beltway Survey #380.

parents for a lift. Opening the driver side door revealed a small waterfall of tire water rushing out with my wallet almost floating out!!! Luckily I caught it and began the freezing drenched wait for rescue.⁴³⁸

Drivers take certain steps to compensate for conditions of heavy rain—Jahanbin writes that the vehicles around him slowed down to about 45 miles per hour—but they still expect that the Beltway, and other highways, will be engineered so as not to subject them to the kind of flooding experienced in this episode.

For the Beltway's original designers, the most pressing challenge concerning water was not how to respond to occasional rain and snow, but how to build the road through an area which itself was water as much as land. The Beltway was slated to run through a portion of Alexandria, west of the Woodrow Wilson Bridge, which was marshland; on that terrain, a regular highway and a regular bridge would both sink. This portion was exceptionally difficult for road-building; for the most part, the topography of suburban Maryland and northern Virginia was conducive to engineers' standard designs.

The Beltway runs across two geologic provinces, neither particularly challenging to highway builders. Much of the eastern half of the Beltway lies in the Coastal Plain, a "gently undulating plain" extending along the East Coast from New Jersey to Mexico.⁴³⁹ This area, characterized by broad tidal estuaries including the Potomac River and Chesapeake Bay, rises gradually from the Atlantic Ocean westward to hills of up to 400 feet near its western boundary. Immediately to the west lies the

⁴³⁸ Beltway Survey #505.

⁴³⁹ Metropolitan Washington Council of Governments, Natural Features of the Washington Metropolitan Area (Washington: Metropolitan Washington Council of Governments, 1968), 3.

Piedmont, a band of rolling hills atop a foundation of rocks running from southern New York southward to Alabama, with elevations ranging from sea level to 1000 feet, and bounded to the west by the Triassic Lowland province. The border between the Coastal Plain and Piedmont roughly bisects the District of Columbia and the Capital Beltway from northeast to southwest, paralleling the Prince George's-Montgomery County line in Maryland (Fig. 9; the easternmost dotted line).⁴⁴⁰ The terrain in both provinces offered few challenges to the Beltway's designers; the sand and mud combination just west of the Potomac River in Virginia was perhaps the hardest puzzle to solve.

"Down when we got down to Alexandria," recalled Jack Hodge, an engineer working for Virginia during the original construction, "in that area there is probably some of the more difficult material that we've ever worked with. That's probably where one of the only sand drain projects has been built. . . . The sand drain is basically to take the water out, and then you build a blanket to put the roadway on top of it."⁴⁴¹

Highway engineers had faced this situation before. The New Jersey Turnpike was planned in the 1950s to run through meadows, near Newark, made up of mud and silt and mostly water, and varying in depth from a few feet to 250 feet. In cases where mud was only a few feet deep, engineers were able to use crushed stone to raise the roadbed above the water table. But near Newark, the mud was much deeper. Gillespie and Rockland describe the solution developed by the engineers working on the Turnpike:

The general principle was to use a great deal of sand as a wick to draw off the

⁴⁴⁰ Ibid., 3-4.

⁴⁴¹ Interview with Jack Hodge, 9 January 2001.

excess water. Specifically, they sank multiple caissons down to a firm stratum, filled them with sand, and then covered them and the surrounding areas with blankets of sand. Gradually and continuously, the water would be drawn up through the caissons of sand and gently distributed to the sand blanket, from which it drained off into the adjacent meadows.⁴⁴²

The engineers who developed the sand blanket in New Jersey worked for HNTB, the same firm hired by Virginia to design its portion of the Beltway. *Sidney Miller and his colleagues were prepared for the marshes of Alexandria because of their experience in the meadowlands of New Jersey. VDH engineer F.L. Burroughs wrote in 1961 about the state's concern and the procedure HNTB was introducing to address it:

Now, the section on Route 1 south of Alexandria is an extremely marshy and wet area. . . . This area could well have been described as "nightmare alley," as far as our stake-out was concerned. We had several very uneasy moments as [stake-out] points seemed to move around. . . .

From this interchange westward along 413 [Virginia's original route number for the Beltway], the roadway is completely in marsh land. To provide stability and underbearing for the beltway, a construction process new to the Department has been undertaken. A contract has been awarded for the construction of a sand-drained embankment utilizing vertical sand drains for the consolidation of the super-saturated marsh land. Imagine a semi-solid mass of soil and water with a soil blanket several feet in thickness placed uniformly over the entire surface. Obviously, owing to its heavier unit density, the blanket will displace the super-saturated marsh material. Because of the overload conditions, a hydrostatic pressure is built up within the semi-solid beneath the overload blanket.

Imagine, next, the tapping of vertical drains of a porous material into this high-pressure area, and the draining of the water, with a resultant loss in pressure and a consolidation of the semi-solid results. . . . The source of the sand and some hydraulic backfill is a pit about two miles downstream in the Potomac River.⁴⁴³

Miller noted that portions of the New Jersey Turnpike were even worse: one area near New Jersey Route 3 "was soup. The designers, we had a foundation for one of the

⁴⁴² Gillespie and Rockland, Looking for America on the New Jersey Turnpike, 32.

⁴⁴³ Burroughs, "The Capital Beltway," 35-36.

bridges that consisted of a series of boxes that actually float. Float in the soup."⁴⁴⁴ But for the Virginia officials working with the Beltway, the Alexandria marshland was challenge enough. HNTB's sand drains allowed the Beltway to pass through areas with water below, just as the drainage systems designed by Fred Pavay and others accommodated the water above.

In addition to precipitation and marshland, the Beltway's engineers also have dealt with vegetation along and on the highway. This component of the Beltway's natural landscape has both aesthetic and safety dimensions. Landscape historian Todd Croteau writes that "[d]irectly linked to the planned experience of a roadway, vegetation enhances the view of the road and from the road. Maintained plantings and mowed bays are in contrast to the unattended roadside of ill repute cluttered with billboards and utility poles."⁴⁴⁵ Supporting Croteau's argument concerning enhancement, several people responding to my survey noted their appreciation for "the flower fields that are on the medians" of the Beltway, and over two dozen specifically pointed to the trees and adjacent wooded areas as their favorite parts of the Beltway landscape.⁴⁴⁶ While most of these address the trees exclusive of any other considerations—such as the response that "the lush trees in the summer are splendid, vibrant, and alive"—one reply acknowledges the deliberate decision-making that surrounds the existence of the trees: "I . . . very

⁴⁴⁴ Interview with *Sidney Miller, 23 February 2001.

⁴⁴⁵ Todd Croteau, "Documenting Park Roads and Parkways," *SCA Journal* 17:1 (Spring 1999): 22-23.

⁴⁴⁶ Quote is from Beltway Survey #151.

much appreciate the effort that goes into the foresting around 495 which keeps it from being too apparent that you are driving through a highly urban area."⁴⁴⁷

The decisions underlying the Beltway's vegetation, at least in Maryland, are based primarily on safety and secondarily on aesthetics. Raleigh Medley, SHA's assistant district engineer for maintenance in the highway district including the Beltway, explained that

we keep the grass at a certain level because of sight distance, those types of things. When grass gets so tall, you don't know what's in it yourself. So it damages our equipment, when we come through and have to cut tall grass, 'cause we can't see what's in there. So from a standpoint of safety issues, that's the main premise.

But then on the other side, we're into now, we'll do wildflowers and such. So now it's more aesthetically oriented also, because not only do we mow for the safety aspects of it, we plant for the aesthetics of it. So now you'll see more landscaping going on. So that part of it is more from an aesthetic standpoint, because now people don't just want to ride the highways, they want to enjoy the highways. So that's what brought this all about.⁴⁴⁸

The SHA's environmental design department, which did not exist at the time the Beltway was originally developed, handles the landscaping:

They go out to design certain areas. Some we bring to their attention, some they bring to ours. We look at it for possible landscape potential. They go out to determine what planting would be more suitable for the area, for the ground, what soils, and they would determine what would grow best there, what would be aesthetically pleasing especially to the décor that's there. They would look at, as far as vegetation-wise, would grow to such a degree that it would be a hindrance to traffic. They look at all these issues. Then we work together to come up with the best for everybody.

In all cases, safety trumps aesthetics. Medley notes that overgrown grass can impair sight distance. Along the same lines, overhanging limbs, regardless of how pretty the

⁴⁴⁷ Beltway Surveys #362 and #344.

⁴⁴⁸ Interview with Raleigh Medley, 19 March 2001.

trees are, are hazards waiting to happen, and this is the case even despite the best efforts of engineers and environmental designers in both states. A Gaithersburg resident recalls "narrowly miss[ing] a tree that had fallen across all but the farthest left lane of the outer loop going into Virginia just after crossing the Amer. Legion bridge. It just came up all of a sudden. Very scary."⁴⁴⁹ Drivers are not always as fortunate; a Rockville resident remembers that

[o]n the inner loop before Wisconsin Ave, I saw a car stopped with a fallen tree over the hood. The policeman and driver were standing beside the road. The policeman was scratching his head. I couldn't help but think he was having to report what would sound like a good excuse, "The tree came out and hit me."⁴⁵⁰

The existence alone of the SHA's environmental design department speaks to a shift in engineers' and drivers' (or taxpayers') concerns; when the Beltway was originally designed, aesthetics came into play only with respect to the defunct parkway segment. My survey responses indicate that some drivers develop a positive emotional connection with the Beltway's vegetation, in many cases the only positive association they have for the road. For planners and for drivers, then, the trees, flowers, and grass along the Beltway are not incidental.

While plants play an important part, by design, in different aspects of the Beltway experience, animals too play a critical role, this one not by design. The presence of domestic and wild animals on the highway does not add to the highway's aesthetics, but it does present a serious safety hazard both to drivers and to the animals

⁴⁴⁹ Beltway Survey #381.

⁴⁵⁰ Beltway Survey #152.

themselves. In the best cases, visits by animals leave only memories, as in this episode experienced by a Bethesda resident:

On a Sunday morning at 9:00 am, I got on at Cabin John Pky. and was in the slowest lane heading toward the Dulles toll road. Right after the overpass at Georgetown Pike, a deer ran into the road in front of me. I braked, she stopped, stared and ran back to the grass. There was a car to my left and one of those tankers that fill up gas stations behind me. I felt very lucky to come out with nothing but the shakes.⁴⁵¹

On other occasions, such as this one recalled by a Silver Spring resident, the animals are not so fortunate:

Several years ago, driving north from Virginia, just before the split to 270 north, in fairly heavy traffic, I noticed some small objects in the road just ahead of me in between my lane and the one to my left. Within seconds, I realized it was a mother duck and four or five ducklings who had started to cross the highway from a patch of woods. They had somehow managed to cross one lane unharmed, but there was absolutely nothing anyone could do for those poor birds, as the cars came upon them so fast. Within seconds, I had passed them, looked in the rearview mirror, and saw the car behind me hit the mother. I got home and cried for about half an hour at the memory. It was the contrast of those huge mechanical behemoths rolling down that road at high speed totally oblivious to those vulnerable birds.⁴⁵²

Even when the animals are not struck, they act as safety hazards to unprepared drivers, who may brake (as in the first example above) or react in other unpredictable ways.

Those who monitor it every day know that despite fences and other precautions—which do better at keeping humans out than animals—the Beltway is a veritable zoo. Sgt. Russell Newell, who works for the Maryland State Police out of Barrack "L" in Forestville, notes a preponderance of hawks and foxes drawn to the

⁴⁵¹ Beltway Survey #174.

⁴⁵² Beltway Survey #489.

Beltway by other dead carcasses, which the predators themselves often join.⁴⁵³ Larry Kidwell, a maintenance supervisor for the SHA, adds to the list deer, geese and beavers, especially in storm management ponds adjacent to the Beltway. The animals, Kidwell says, have their own favorite spots:

Near the Woodrow Wilson is a hot spot for deer. . . . Between Branch Avenue and Maryland 4 we have the pond with the beaver, with the geese and turtles. Every once in a while we get a giant snapping turtle that tries to cross the Beltway. They weigh anywhere from 25 to 30 pounds, and they try to cross the Beltway and they're awful slow. . . . As far as other small animals, a few dogs. Very few cats. But dogs, deer, are about the most. Dogs and deer.⁴⁵⁴

Dogs and cats are a separate question, but where do the wild animals come from? The deer and beavers often live in the woods; the same trees which create a serene atmosphere for drivers provide shelter for animals in a densely suburban area where such cover is limited. Deer appearances are concentrated in wooded areas, particularly the Rock Creek Park segment (near the Wisconsin Avenue interchange) and the portion cited by Kidwell.⁴⁵⁵ In addition, high-tension power lines cross the Beltway in several places, and these draw animals. Landscape historian John Stilgoe points to the clear-cut areas beneath power lines as an alternate highway system, where the vegetation is often cleared because "nothing must grow tall enough to carry some storm-induced spark between the high-voltage line and ground. Nothing must ground out the electricity already straining at its confining cables." Wild animals, including

⁴⁵³ Interview with Russell Newell, 15 March 2001. Future citations to Newell refer to the same interview.

⁴⁵⁴ Interview with Larry Kidwell, 20 March 2001. Future citations to Kidwell refer to the same interview.

⁴⁵⁵ Interview with members of the Chevy Chase Fire Department; Brian Mooar, "The Buck Drops Here," Washington Post, 7 February 1996: B2.

deer, often depend on those clearings as safe places and as routes on which to travel between parks and other wooded areas.⁴⁵⁶

Domestic animals, on the other hand, are more often introduced to highways more directly by individual people. In some cases, dogs from nearby homes accidentally make their way onto the Beltway. In others, they may be brought intentionally; in Los Angeles, for instance, "sometimes animals are deliberately introduced into the freeway network. Lacking rivers and bridges, owners of the city's unwanted puppy litters leave them by medians in open bags to be killed."⁴⁵⁷ State maintenance workers and police are prepared for either of these scenarios, but not for the occasional surprise, such as the Thursday in June 1995 when a dozen half-ton Black Angus cows broke free from a tractor-trailer stopped for a flat tire, and stampeded down the Beltway near Telegraph Road in Virginia in the middle of the night. The cows ran back and forth, jumped police cars, got stuck darting under tractor-trailers, explored adjacent apartment parking lots and back yards, and left cow pies across the Beltway. State police, improvising, used ropes, lassoes, police cars, and a helicopter equipped with infrared radar to recapture all of the cows over a span of four hours.⁴⁵⁸

In more routine cases, dogs or deer dart onto the Beltway and either dash off or are struck by vehicles. Dogs tend to create more "havoc," Larry Kidwell explains, because if they don't get hit right away and killed, [they] may cause a major accident. Deer, they just bolt out of nowhere, and nine times out of ten they don't make it past the

⁴⁵⁶ Stilgoe, Outside Lies Magic, 33-34.

⁴⁵⁷ Dave Gardetta, "Hard Drive," Los Angeles, 46.4 (April 2001): 68.

⁴⁵⁸ Steve Vogel, "The Latest Commuter Beef," Washington Post, 16 June 1995: B3.

first three or four lanes and they're gone. And we have to go out and pick 'em up."

When this happens, at least in Maryland, SHA personnel and state police receive a "10-45" code over their radios. The Maryland State Police communicate in part through a list of "10 Codes," from the familiar "10-4" ("Acknowledgement") to "10-92" (Improperly parked vehicle"). The "10-45" code, followed by a location, indicates "Animal carcass at" the specified site.⁴⁵⁹

Depending on the type of animal, the time of day, and the location of the collision, carcasses may be torn to pieces by the time state personnel arrive. Raleigh Medley of SHA notes that "when all the semi tractor-trailers are going up there, a deer doesn't stand a chance. By the time you arrive, it's gone. You might find a hoof here and an ear there, but there's not going to be much there to pick up."⁴⁶⁰ If the 10-45 call goes out in time for the entire carcass to be removed, SHA workers bring it to individuals under contract who then transfer it to "rendering factories" (according to Sgt. Newell) or to sites which use carcasses for other purposes.

However, state police are often the first on the scene of 10-45s, and for the sake of decreasing the potential danger, often take the situation literally into their own hands. Cpl. Lorenzo Miller of the Maryland State Police, working out of Barrack "Q" in College Park, confirms that "if I come across an accident where a deer was struck and is still in the roadway . . . we will remove that deer. We will pull that deer off the road . . . and move it onto the shoulder. And if there's anything left, we will contact the State

⁴⁵⁹ "SHA/MSP 10 Codes," undated document provided by Raleigh Medley, Maryland State Highway Administration, March 2001.

⁴⁶⁰ Interview with Raleigh Medley.

Highway Administration to come and pick it up. But yeah, we have to move that deer."

Miller, who has pulled "many a deer out of the road," notes that the animals cause serious damage to vehicles and their occupants even as they are injured or killed themselves in collisions.⁴⁶¹ Margo Stanton, with the Kensington Volunteer Fire Department, recalls a more spontaneous response:

I work with the police a lot. And they were bringing me home one night, it was like two, three o'clock in the morning. And one of the guys was bringing me home, and someone had just hit a deer on the Beltway. And so the police officer pulled over, took out his gun, dragged this huge buck off the Beltway—I mean, I couldn't believe that he even got near him, because I was like, What are you doing? "I'm a hunter!" . . . So he put him out of his misery. I couldn't believe it. So there were three cars down, damaged by this deer that had just unfortunately come out into traffic. So now traffic was backed up because of the deer, and nobody wanted to, you know, the poor deer, and it was just a mess.⁴⁶²

Maryland highway officials have procedures in place to respond to struck animals, and are tracking exactly where deer are hit in order to take further preventative measures. Still, they do not expect the animals to stop coming any more than Isadore Parker and Fred Pavay expected their drainage systems to stop all precipitation from affecting the Beltway; in both cases, the state has taken steps to minimize the danger to drivers brought by inevitable forces of nature. The deer, of course, are less inevitable than the rain; if development had not decreased the animals' natural habitat so drastically, the deer would likely not be as highly concentrated in the remaining wooded areas, including those which make the Beltway look nice. Medley acknowledges this link between transportation, land use, and wild animals:

⁴⁶¹ Interview with Lorenzo Miller, 21 March 2001.

⁴⁶² Interview with members of the Kensington Volunteer Fire Department, 29 January 2001.

If you think about it, everywhere you look there's a building. No trees. So if my habitat is the woods and there are no woods, you've got to go somewhere. And you've got to cross somewhere to get to that somewhere. And it just so happens that you've got to cross the Beltway. You've got to cross the Interstates. And that's where dead animals happen more and more, because the more we develop, the more you push them out of their natural habitat. And you're going to see more of it. I don't see it decreasing.

In dealing with the natural environment with respect to the Beltway, then, highway officials appear to prioritize drivers' safety most highly (though interestingly, not in the case of the allegedly non-functional fire hydrants), then aesthetics, and then the natural elements themselves. In other components of the Beltway landscape which, unlike rain or geese, have been intentionally introduced, safety is even more directly the key objective. So it is ironic that the Beltway's artifacts—signs, signposts, guardrails, and more—have instead in some cases compounded the danger to drivers rather than decreasing it.

The Material Culture of the Beltway

In 1966, a team of safety advocates including Ralph Nader, William Haddon, and Daniel Patrick Moynihan testified before Congress in favor of legislation to develop a federal regulatory agency for traffic safety. A key problem, they argued, was that cars were much more dangerous than they needed to be. Auto manufacturers had, until then, designed cars with aesthetic and engineering concerns in mind, but without much respect for the safety of passengers and drivers. As a result, most cars had steering columns which upon impact pushed back into the passenger compartment and impaled the driver, protruding and unpadded knobs and instrument panels, seats without head

restraints, and unglazed windshields which slashed faces during accidents. All of these conditions were fairly simple to change, and under safety standards soon imposed by the National Highway Traffic Safety Administration, they were. That simply, cars' altered designs made them far safer.⁴⁶³

A similar scenario took place with highway design. A road like the Beltway requires an assortment of objects to guide and protect motorists, including signs, signposts, guardrails, and lampposts. In a report to the Highway Research Board in January 1960, highway engineer K.A. Stonex encouraged designers to place these potential hazards away from the roadside, or if that was not possible, to build them in such a way as to fall down upon impact without hurting anyone. Although this research was available to the engineers designing the Beltway in the late 1950s and early 1960s, they—and fellow engineers across the country—did just the opposite. This may have been because highway officials were trained to think about educating the public about accident prevention rather than building it into their designs, because individual objects along the road tended to be overlooked in the design of major highways, or because long-approved designs were difficult to change even in order to conform to improved safety practices. Whatever the reason, unnecessarily unsafe design of the Beltway's accoutrements turned it, from day one, into an "obstacle course with built-in booby traps virtually every mile."⁴⁶⁴

⁴⁶³ Malcolm Gladwell, "Wrong Turn," New Yorker, 11 June 2001: 53.

⁴⁶⁴ Hank Burchard, "Perilous Beltway," Washington Post: 21 November 1971: A1. The Highway Research Board, which became the Transportation Research Board in 1974, is a unit of the National Research Council, itself a constituent agency of the National Academy of Sciences. See <<http://www4.trb.org/trb/homepage.nsf/web/about>>.

The unnecessarily dangerous elements included:

1. Unsafe "gore" areas (where drivers must decide whether to go left or right; often unsure drivers decide too late and drive into the gore) containing heavy signposts, lampposts, and pointed guardrails.
2. I-495 shield markers and other signs mounted on twin metal four-inch I-beams which destroy cars striking them at full speed; single wood support posts would have been far safer.
3. Short sections of guardrails too short to shield dangers behind them but long enough to spear a vehicle and its passengers.
4. Rigid lampposts immediately adjacent to the pavement, unshielded.
5. Exposed pillars and abutments on bridges, and guardrails on bridges which directed vehicles into rather than past obstacles.⁴⁶⁵

These flaws were directly responsible for many of the Beltway's deaths and injuries in its first years. In 1966, for example, 16 of the 30 deaths on the Beltway involved drivers running off the side of the road into one or more stationery objects. At the Wisconsin Avenue interchange alone that year, 41 of 78 accidents involved cars striking light poles or bridge piers.⁴⁶⁶

In 1967, a House subcommittee studying highway design and safety problems heard testimony about potential reasons and solutions for the Beltway's dangers. House members were shown pictures of accidents with "guard rails which impaled cars like bugs on a pin," and of a single six-inch steel pipe holding up a sign on Shirley Highway near the Beltway which helped cause an accident resulting in four deaths and five injuries. Joe Linko, a safety advocate who testified in 1967 and continued to press highway and political officials for years afterward, later pointed to "the stupidity of engineers and construction crews who just don't think about what they're doing. They put up a guard rail. Then, 15 feet away, they put up a heavy steel signpost, so you have

⁴⁶⁵ Ibid.

⁴⁶⁶ Lee Flor, "House Unit Studies Reasons for Rise in Beltway Deaths," Evening Star, 8 June 1967: B-1.

to knock down the signpost and kill yourself before you get to the guard rail that's supposed to protect you."⁴⁶⁷ Editors of the Washington Post in 1971 echoed that

in most accidents [one every three hours in 1970], the carnage resulted when cars strayed from the roadway and then ran into objects that were supposedly placed there to protect the motorist. These include signs, light poles, sign posts, guard rails, lane dividers, and bridge abutments. Built as an example of the best that American technology could provide, the Beltway, in some nine years of operation, has become one long danger zone.⁴⁶⁸

Following up on these concerns, both states began by 1968 to replace the dangerous objects with safer versions. Maryland, for example, dismantled guardrails less than 75 feet long and turned down the ends of the remaining ones. Virginia removed signs from the roadside and gore areas and moved them to overhead locations or sites farther removed from the shoulder. Both states began to switch to breakaway light poles and sign supports.⁴⁶⁹

But institutional memory fades quickly, and within a decade Virginia officials had reintroduced an old problem while trying to solve another. Virginia began in the mid-1970s to build additional lanes to add capacity to its original four-lane design, but in doing so used timber barriers to separate drivers from the ongoing construction. This, recalls Virginia State Police Master Trooper Bill McKinney, resulted in

many, many accidents involving the type of barriers that we used at the time, which were basically just a 12 by 12 block of wood with a railing attached to it. We had many accidents with people just driving and getting mesmerized

⁴⁶⁷ Ibid.; Lee Flor, "House Study of Beltway Lays Toll to Poor Design," Evening Star, 9 June 1967: B-1; Hank Burchard, "Bronx Repairman Warns of Built-In Death Traps," Washington Post, 26 February 1972: B4.

⁴⁶⁸ "Safety on the Beltway" [editorial], Washington Post, 20 November 1971: A16.

⁴⁶⁹ Anne Christmas, "Major Improvements Due for Beltway," Evening Star, 18 August 1968: B-6.

looking at them as they drove, and before they knew it they were into them.⁴⁷⁰

In 1976, five Beltway drivers and the Building and Construction Trades Department of the AFL-CIO sued Virginia over the unsafe barriers and asked for a cutoff of federal money to the Beltway widening until safety standards were improved. The wooden barriers provided multiple hazards, the suit charged. In the first place, they were not strong enough to withhold an out-of-control car, so that drivers were plowing through the barriers and into construction crews and equipment on the other side. Worse, as the barriers splintered apart, they sent showers of wooden spears toward nearby vehicles and onto the construction crews. VDH officials noted that the barriers had been approved by federal and state officials and were only intended to warn drivers away, not to be capable of protecting them.⁴⁷¹ Increased use of concrete Jersey barriers by the late 1970s put an end to this particular concern.⁴⁷²

In both states, addressing the hazards created by the Beltway's objects did not entirely solve safety problems; the road surface itself tended to crack and break, especially in the first few years after the Beltway opened. In later years, heat caused sections in Virginia to expand and buckle, and winter weather and age led to large

⁴⁷⁰ Interview with Bill McKinney, 24 April 2001.

⁴⁷¹ Doug Brown, "Wooden Barriers at Beltway Work Sites Called Hazardous," Washington Post, 3 August 1975: B3; Jane Seaberry, "Va. Beltway Safety Plan Accord Set," Washington Post, 19 September 1975: C1; Laura A. Kiernan, "Hazards on Beltway Unavoidable," Washington Post, 16 August 1975: B2; Douglas B. Feaver, "Beltway Hazards Cited: Drivers, Workers Sue," Washington Post, 27 February 1976: B1.

⁴⁷² See Scott M. Kozel, "New Jersey Median Barrier History," http://www.roadstothefuture.com/Jersey_Barrier.html (22 October 2001).

potholes opening on bridges in Maryland.⁴⁷³ But it was the original process for constructing the pavement in Maryland which caused what former State Roads Commissioner Slade Caltrider calls "one of the biggest mistakes," although it was standard procedure at the time.⁴⁷⁴ The State Roads Commission paved part of the original Beltway with Portland Cement concrete, which cracks when exposed to changing temperature while expanding in heat and contracting in cold. To control the cracking, reinforced steel is placed in the fresh concrete at regular intervals, and to relieve tension on the steel, it too is interrupted at regular intervals (40 feet on the Beltway). Cracks form at those intervals. To control them, engineers form narrow trenches across the width of the pavement at regular intervals.⁴⁷⁵

In earlier years, these trenches were formed by hand at great cost. For the Beltway, SRC engineers used new techniques in which concrete or masonry saws cut the trenches, or joints, into the concrete. To their surprise, within a few years of the Beltway's opening, these joints began to crack and create bumps on the pavement's surface. Former District Engineer William Shook recalls that

we experienced serious problems with failures of the concrete within two feet of these joints within two years after completion. These early failures occurred only on Kenilworth Ave. and the Beltway project from Georgia Ave to University Blvd. Investigation of this problem revealed that it occurred only on pavement using gravel for aggregate and not those using crushed stone as an aggregate in the mixture. The SRC immediately barred the sawed joint method of forming these joints when the contractor elected to use gravel as the aggregate in the mixture.

⁴⁷³ "Beltway Buckles, Backs Up Traffic," Washington Post, 28 July 1973: B4; Alan Sipress, "Potholes Cause Jam on Outer Loop," Washington Post, 2 February 2000: B2.

⁴⁷⁴ Interview with Slade Caltrider.

⁴⁷⁵ William Shook, email to Jeremy Korr, 20 October 2000.

This same problem and conclusion of its cause was experienced in other parts of [Maryland] and in other states where mined gravel was used. Extensive research was done by the Portland Cement Association and others to find the cause without much success . . . but it was conclude[d] that vibration caused by sawing through the very hard stones in the gravel while the concrete was still weak and had not gained very much strength was the probable cause.⁴⁷⁶

While state engineers believed they were using state-of-the-art construction methods, the burst joints instead created a headache for drivers, a hazard to their tires, and "a substantial effort" for the SRC to deal with.⁴⁷⁷

Within a decade of its opening, highway officials in both states finally had the dangers posed by signs, posts, guardrails, and pavement under much more control than in 1964. What they could not control as easily were the additional objects added daily to the Beltway in the form of litter and debris falling from passing vehicles. For this, officials had to respond in the same way they did to water and rain: assume that debris is inevitable and develop strategies to minimize its danger. Litter, though, offers a different challenge than rain, snow, or even deer, because its distribution is so random; maintenance crews do not know where it will appear or even that it has, and drivers are not attuned to it because they rarely see more than single pieces.

Still, these pieces are hazardous. Both states send crews of workers or inmates on regular rotations to collect garbage from the roadside, but large objects in the roadway demand immediate attention. Within his jurisdiction in Prince George's County, SHA maintenance supervisor Larry Kidwell oversees a "spot litter" team consisting of "two guys in a truck, and all they do is patrol the Beltway, an 18-mile

⁴⁷⁶ Ibid.

⁴⁷⁷ Interview with Slade Caltrider.

stretch from Route 50 to the Woodrow Wilson, every day, just to pick up the large debris that flies off those vehicles. Every day." Kidwell emphasizes the danger posed by the objects:

When I say big debris, I'm talking about bed liners. I'm talking about hoods, bumpers. Very large boxes. Mud flaps. Retread. A whole lot of retread. Retreads even going into the wintertime. It used to be just a summertime project, where the tires get hot from the heat and from the road, the blacktop being real hot; they explode. The truckers on the CB call them alligators. When you get a big retread laying there about 8 to 10 feet long, they call them alligators. That's just a CB slang. But we're out there everyday, just to pick that stuff up.

You wouldn't believe the stuff that you run across. I tell you, the worst nightmare was a box of nails. Roofer nails. A 50-pound crate of roofer nails fell off on the Beltway one way. I'm telling you, there was cars lined up down the shoulder with flat tires. My guy, in the dump truck, the one that runs up and down and picks up the big stuff: He ran down there, and when he came into the shop, he only made it in here on four tires. And he's got six tires on that truck. He only came in on four. And every tire had at least eight to twelve nails in each tire.⁴⁷⁸

Unexpected debris can appear at any time, Kidwell warns; most drivers, who have not seen the possibilities firsthand, are not as vigilant as they should be.

Unsuspecting drivers can be hit with debris from above or below. A Greenbelt police officer describes a colleague who drove south on the Beltway past the Baltimore-Washington Parkway interchange,

and he ran over a piece of a leaf spring that looked like it had come off of a dump truck. And this thing came up through the floorboard of his car and hit him in the ankle. . . . It looked like a small explosive device had gone off underneath the car. Cause it just ripped the floorboard open. And he was off work a couple days. It just badly bruised him. But I saw the one piece of the leaf spring. And you could tell the leaf spring, because it was curled on one end, the other end was real jagged. And the first thing I thought of, if that sharp end had come through, there's no doubt it would have severed his leg, or severed his foot. I mean, that's another thing most people don't think of, running over

⁴⁷⁸ Interview with Larry Kidwell.

something. . . . That was the first time I had ever heard of anything coming up through the floorboard.⁴⁷⁹

In other cases, the unexpected object is much more apparent. Kenneth James of Arlington relates the following experience:

One afternoon, when I lived in Silver Spring, I was driving home to my parents' house in Bowie. It was right about the college park area, when I noticed I was behind an SUV with a LARGE small boat tied to the top of it. The boat was twice as long as the vehicle, was properly flagged, but was bobbing up and down in the wind. It began to bob up and down more violently. I made a very quick decision to floor it and pass the truck. When I pulled even with it I looked over at the suv thru my sunroof and could see the boat and the roof of the truck. Suddenly, as I suspected was going to happen the boat lifted up, and disappeared. I glanced in my rear view mirror, and after about 3 seconds saw it crash on the beltway, right in the middle. It broke in half, one half smashing the front of a car, the other smashed into a hundred pieces under a tractor trailer. The car kind of wrecked into the jersey wall in the center, the truck swerved all over, almost lost control, but managed to come to a stop half off the beltway on the inner side of the inner loop. I kept driving, very shaken, and VERY thankful i had the presence of mind to get out of harms way, before harm happened!⁴⁸⁰

Survey respondents tell of metal pipes, metal frames, and plywood sheets falling from vehicles in front of them; one writes of a "tractor trailer load of oranges dumped all over the beltway . . . it wreaked havoc on the cars behind me, while I only drove through a dozen or so bouncing oranges."⁴⁸¹ Bonnie Douglas, an Elk Creek, Va., resident, remembers "vividly when the tanker truck carrying vegetable oil overturned and

⁴⁷⁹ Interview with *Ethan Gould, 2 February 2001.

⁴⁸⁰ Beltway Survey #407.

⁴⁸¹ Beltway Survey #380. The other examples cited appear in Beltway Surveys #254, 267, 517. For an example of unexpected debris (a 27-pound fragment of a brake drum) serving as a deadly projectile, see Stave Bates, "Death Out of Nowhere," Washington Post, 29 July 1983: A1.

ruptured at the Van Dorn Street exit. It was freezing and the veggie oil became thick. I remember them using snow plows to plow the 2 inch thick mess from the road."⁴⁸² Between boats, nails, boxes, "alligators," frames, pipes, oil, oranges, potholes, guardrails, signposts, deer, dogs, turtles, rain, and heavy traffic, the Beltway, highway officials and police officers in both states emphasized to me repeatedly, deserves a higher level of alertness than most drivers believe they need to give to it.

The physical components of the Beltway do have some positive attributes as well. Highway officials have for decades tried to use the Beltway's structure to enhance rather than impede safety and traffic flow. Fences along the Beltway, initially chain-link in Maryland and both "farm-type" (on creosote-treated wooden posts) and chain-link in Virginia, discourage pedestrian and wildlife trespassing.⁴⁸³ A \$461,000, 31-inch high median barrier was added to the Wilson Bridge in 1968, where the original 7-inch high curb-like median had previously failed to prevent ten fatal accidents caused by vehicles crossing the median.⁴⁸⁴ By 1983, Virginia had installed over 15,000 foils, green plastic slats mounted atop median strips to block the glare from oncoming headlights; a VDOT official called the foils "the single most effective thing we have ever done to reduce accidents on the Beltway."⁴⁸⁵ Maryland experimented with a system of 264 solar-celled

⁴⁸² Beltway Survey #357.

⁴⁸³ "Fences to Line Entire Route of Highway," Evening Star, 16 August 1964: E-7; "Beltway to Get Chain Link Fences," Evening Star, 22 December 1964: B-13.

⁴⁸⁴ "Contract Let to Build Wilson Bridge Barrier," Evening Star, 16 October 1967: B-2; "Barrier to Avert Crashes is Begun on Wilson Bridge," Evening Star, 4 March 1968: B-1.

⁴⁸⁵ Jim Wolffe, "Foiled Again," Fairfax Journal, 22 March 1983: A1.

call boxes in 1967, but with 20 to 35 percent of the phones routinely broken by 1973 and with one-third or more of emergency calls proving to be false alarms, the state eventually discontinued the practice. The call boxes were effectively replaced by widespread use first of CB radios and then cellular phones.⁴⁸⁶

Corrections to early versions of objects along the Beltway increased their potential for protecting drivers and passengers. Guardrails, after highway officials changed their original dangerous configurations, became the safety boosters they were intended to be; Ruth Liljenquist of Williamstown, Mass., recalls

merging from Northbound GW Parkway in VA onto the beltway, and as I went around the very tight bend on this ramp/merge lane, the car skidded on the wet road, flipped around a few times and then went straight toward the beltway. I hit head-on one of the guard rails lining the beltway. It was a good thing it was there. Otherwise I would have plowed straight across four lanes of fast-moving traffic, and would have most certainly lost my life. When I think about it now, 3 years later, I can still see the lights of all the on-coming traffic on the beltway, and it scares me, knowing how close I came to losing my own life and perhaps causing the deaths of other people.⁴⁸⁷

Solid metal signposts have been replaced by versions which break into pieces upon impact. Craig Hinnners, a project manager for Midasco Inc., which under contract with the SHA took care of signs on Maryland's portion of the Beltway between 1997 and 2001, describes the "breakaway coupler" called "Breaksafe," used by the state in 2001:

⁴⁸⁶ Myron Becker, "Call Boxes on Beltway Slated for Use by July," Evening Star, 19 June 1967: B-3; Paul Hodge, "Their Own Troubles May Quiet Beltway's Trouble Call Boxes," Washington Post, 26 November 1967: D1; Dickson, "Capital Beltway," 19. In 1987, a private company set up ten emergency cellular phones at five sites in both states for a 90-day test, but neither state elected to follow through with a more comprehensive cellular system; by the 1990s, the need for call boxes declined with the increasing use of personal cell phones. See John Lancaster, "Cellular Phones to Get 90-Day Test on Beltway," Washington Post, 9 April 1987: D5.

⁴⁸⁷ Beltway Survey #138.

They're what we call two feet on either side of the beam. We pour the foundation; there's a threaded insert that we put into the concrete foundation, which after it's cured we come along and put in the, screw in a special type of bolt which sticks through the holes that you see there. And the bolt--it isn't like a normal bolt, it tapers down to a very thin point. And that's the point at which it's gonna snap if somebody hits the post. Halfway up the post, normally the bottom of the sign would be justified in that splice right there. If you look at those splices holding the top of the post or the bottom, there's also a groove in there, and that's where it will break away, the theory being that the car will knock away the bottom section of the post, drive right underneath the sign, before the sign has time to fall down on top of it. That's why the regulations in Maryland, there's a minimum height, 7 foot 6, the sign has to be off the ground, so the car can drive right underneath it.⁴⁸⁸

Even snow now serves as a traffic control device; savvy highway officials recognize that packed snow (atop salt)—unlike ice or a light layer of rain—will induce drivers to slow down for caution while still providing adequate traction in most cases.⁴⁸⁹

In addition to adjustments in smaller objects along the Beltway, Maryland and Virginia both made ongoing changes to the road's structure itself between 1964 and 2001 to improve safety and traffic efficiency. As vehicle counts climbed repeatedly beyond planners' projections, Maryland expanded most of its portion from six lanes to eight (1972) and in some areas ten (1993); Virginia followed by expanding from four and six lanes to eight (1977 with a final segment in 1992).⁴⁹⁰ Maryland reconstructed its

⁴⁸⁸ Interview with Craig Hinnens, 27 February 2001.

⁴⁸⁹ Interview with Larry Kidwell.

⁴⁹⁰ For Maryland, see "Maryland is Widening 32 Miles of Beltway," Evening Star, 15 December 1970: A-15; Martha Angle, "Maryland to Widen Beltway," Evening Star, 20 December 1971: A-1; Lisa Leff, "2-Mile Stretch of Md. Beltway to be 10 Lanes," Washington Post, 4 September 1990: A1; Stephen C. Fehr, "Amid Money Crunch, Beltway Projects Are Modest Improvements," Washington Post, 5 September 1990: C1; Stephen C. Fehr, "Md. Starts New Phase of Beltway Widening," Washington Post, 13 March 1992: B1.

aging bridges in Montgomery County, beginning in 2000 and stretching beyond 2001, and causing unprecedented backups on Colesville Road and Georgia Avenue leading up to the entrance ramps fronting on the portions under construction.⁴⁹¹ Each state improved certain interchanges notorious for bottlenecks (in particular, Maryland's I-95/I-495 junction) and added additional interchanges, including the Eisenhower Avenue Connector in Virginia and the Greenbelt Metro station in Maryland.⁴⁹²

The interchange drawing the loudest outcry for improvement immediately after the Beltway's opening was the same Pooks Hill junction—linking Wisconsin Avenue, I-270, and the Beltway—which had almost been built on a misplaced abutment. There, certain spurs of the interchange seemed absent for no reason: drivers heading north on

For Virginia, see "Beltway Widening Approved," Fairfax City Times, 4 September 1964: 7; "3rd Beltway Lane Studied in Virginia," Evening Star, 10 January 1970: A-11; Jane Sims, "Beltway Widening Planned This Fall," Fairfax Journal, 26 April 1970: 1; "Urges Wider Beltway," Fairfax Herald, 26 February 1971: 8; Martin Weil, "Widening of Beltway Planned," Washington Post, 7 May 1972: C10; "Agreement Reached on Widening Capital Beltway to Eight Lanes," Fairfax Herald, 12 May 1972: 1; Joe Bergantino, "Delay in Beltway Widening," Fairfax Journal, 29 November 1973: 1; "Beltway Widening Begun in Virginia," Washington Post, 18 April 1974: C2; "Capital Beltway is Open House Topic," [Fairfax] Globe, 2 May 1974: 5; Judy Nichol, "Va. Beltway Being Widened; Traffic Worse," Washington Post, 11 May 1974: D4; Christy Hudgins, "Va. Widening of Beltway Finished After 3-1/2 Years," Washington Post, 31 July 1977: C1; Judy Valente and Eugene L. Meyer, "Beltway Blues: An Expressway to Frustration," Washington Post, 11 November 1977: A1.

⁴⁹¹ Alan Sipress, "Beltway Jam to Worsen in Maryland," Washington Post, 30 December 1999: B1; David Fishlowitz, "Backups Now Occur Off the Beltway," Rockville Gazette, 13 June 2001: A-20; Katherine Shaver, "Bridge Work on Beltway in Md. Hits Raw Nerve," Washington Post, 19 June 2001: B1; Katherine Shaver, "A Crucial Merge Onto Beltway Being Restored," Washington Post, 16 December 2001: C1.

⁴⁹² John Lancaster, "Beltway project at I-95 Nearly Complete," Washington Post, 8 March 1987: D1; Stephen C. Fehr, "Constructive Confusion on Beltway," Washington Post, 9 December 1990: B1; Lena H. Sun, "Va. Road Officials Change Stand, Back Beltway Interchange," Washington Post, 22 November 1983: B1; Lena H. Sun, "Cameron Run Beltway Access Backed," Washington Post, 21 January 1984: D2.

Wisconsin Avenue could not exit on the Beltway eastward, nor could westbound Beltway traffic exit onto Wisconsin Avenue south. State Roads Commission officials justified the omissions as early as 1960 by claiming that traffic projections for movements in those particular directions did not justify the expense to build the exit ramps. Summing up the frustrations of the many drivers who did need to use the missing ramps, Montgomery County Planning Board Chairman Newton Brewer Jr. noted, one month after the Beltway opened, "How the Federal Bureau of Public Roads could approve an interchange like that one is beyond me. A freshman in engineering school couldn't design such an interchange. It looks as if it were done by somebody in kindergarten." Using federal funds as well as state funds specially granted for the purpose, Maryland added one ramp and modified another in 1968 to partially alleviate the problem, though the unusual configuration remained confusing to drivers unfamiliar with it, with repercussions discussed in the next section.⁴⁹³

While the Pooks Hill interchange continued to stymie drivers for years, other aspects of the Beltway confused drivers even more, and this general confusion—and the failure of objects placed along the Beltway to alleviate it sufficiently—has in itself created a danger in some cases as potent as the physical obstacles named earlier. Locals

⁴⁹³ George Beveridge, "Two Pooks Hill Turns Omitted as Unjustified," Evening Star, 13 January 1960: B-3; Anne Christmas, "Montgomery Asks U.S. Help to Find Two Exits Missing From Beltway," Evening Star, 16 September 1964: B-5; Martha Angle, "Pooks Hill Interchange Getting 2 More Ramps," Evening Star, 9 March 1966: B-1; "State to Seek Pooks Hill Bids," Evening Star, 7 April 1966: B-4; "Funds Sought for 2 Ramps as Pook's Hill [sic]," Evening Star, 25 May 1967: B-2; "Agnew Allots Special Fund for Pook's Hill [sic] Interchange," Evening Star, 2 June 1967: C-1; "U.S. Rejects Pooks Hill Ramps Bid," Evening Star, 19 September 1967: B-1; Anne Christmas, "Beltway Ramps Due at Pooks Hill in June," Evening Star, 12 October 1967: B-3; "Pooks Hill Ramp to Beltway Opens," Evening Star, 3 November 1968: F-6.

and long-distance travelers alike have trouble making sense of a road which is a loop, as journalist Joel Achenbach explains:

Aimlessness is not a huge issue, given that by design it is a road that goes nowhere. It has no beginning and no end, no primary direction or orientation. The integrity of words such as "southbound" and "westbound" collapses on the Beltway. The closest thing you get to guidance is when you see a sign saying "Inner Loop," which means that you are heading either west, north, south, or east. . . . Sometimes you go right, sometimes you go left, sometimes you seem to be going right and left simultaneously, sometimes you aren't going anywhere; at all times you seem on the verge of catastrophe, and although you are definitely in the loop you're never quite sure which loop.⁴⁹⁴

Drivers accustomed to orienting themselves by the compass are baffled by "the damn signage . . . with respect to compass directions and exit numbers. Are we really going North to Baltimore in Oxon Hill when my car is pointed due East?"⁴⁹⁵ A Beltsville resident writes that "the frustration of learning to navigate a circle while trying to discern east, west, north and south causes my wife and [me] to express ourselves like we shouldn't."⁴⁹⁶ "I know many people," echoes a driver from Alexandria, "who have trouble figuring out directions on the Beltway. As one of my friends has said, 'How am I supposed to deal with North and South on a road that goes in a circle?!'"⁴⁹⁷

Signs are supposed to be the antidote for this situation; with clear and definitive signage, highway engineers can pre-empt confusion before it happens. But the

⁴⁹⁴ Joel Achenbach, "A Loopy Birthday to the Beltway at 30," Washington Post, 17 August 1994: B1.

⁴⁹⁵ Beltway Survey #260.

⁴⁹⁶ Beltway Survey #500.

⁴⁹⁷ Beltway Survey #382. See also Kevin Flynn, letter to the editor, Washington Post, 15 May 1981: A18; John F. Zugschwert, "Banned on the Beltway: Any Semblance of Logic," Washington Post, 10 September 1989: C8.

Beltway's signs have proved problematic since the very day it opened. Letters to the Evening Star in the first two weeks after August 16, 1964, pointed out that Beltway signs were hard to read against the sun, hard to read at night, too small, inconsistently marked between signs at exits and signs preceding them, missing the word "Beltway" (in Virginia), and garbled. "The Maryland signs," a District resident wrote,

must surely have been planned by a schizophrenic who couldn't decide whether he never wanted people to find the beltway or never to leave it. The streets that everyone knows by name are referred to by route number. At the points where there is an exit in only one direction from the beltway it isn't marked. The signs that point out the entrances to the beltway are right at the entrances. Why not give people a chance?⁴⁹⁸

Particularly confusing to many drivers are the Beltway's control cities, the destinations listed on exit signs. Fairfax business leaders had complained well before the Beltway opened that the signs in its jurisdiction were misleading and inaccurate, particularly the repeated appearance of Annapolis (which is far from Fairfax and where the Beltway does not even go) and the regular use of small communities (e.g., Franconia) in favor of larger ones (e.g., Springfield).⁴⁹⁹ Drivers have run into particular trouble with the use of distant sites as control cities: "One thing I really hate about the Beltway is the way it uses the confusing signs, 'to Richmond' or 'to Baltimore' when trying to get onto it," an Arlington resident writes.⁵⁰⁰ Drivers looking for Falls Church, Rockville, or Lanham find themselves guessing when signs onto the Beltway point

⁴⁹⁸ Seth Beckerman, letter to the editor, Evening Star, 23 August 1964: A-10. See also Anonymous and R.H. Dean, letters to the editor, Evening Star, 30 August 1964: B-1; and "Motorists' Confusion on Beltway Filmed," Evening Star, 14 July 1968: B-4.

⁴⁹⁹ "Hiway Signs Get Review After Query," Fairfax City Times, 29 August 1963: 1; "Fairfax C. of C. Protests Highway Signs," Fairfax Herald, 10 October 1963: 10.

⁵⁰⁰ Beltway Survey #274.

them toward Baltimore, Richmond, and Andrews Air Force Base. And drivers looking for Washington are misled entirely, by signs which list Washington as a destination but never mention explicitly that the Beltway does not go there. (Exit signs for other roads crossing the Beltway, including Georgia Avenue, further direct drivers toward Washington.)⁵⁰¹

The numbering schemes on the Beltway have only made things worse. In 1964, the original Beltway exit numbers ran simply and consecutively, clockwise from the Woodrow Wilson Bridge, from 1 to 38. In 1980, Maryland changed its numbers to reflect mileage from the bridge running counterclockwise, from exit 2 to 41, while Virginia kept its numbering with 1 to 14 running clockwise. In 1981, Virginia renumbered its exits 1 through 4 (between I-395 and the bridge) as 58 through 61 to be consistent with the rest of Interstate 95. This "atrocious," as Washington Post editors called it, resulted in "two unrelated sets of Virginia Beltway exit numbers, going in opposite directions," and "two unrelated sets of exit numbers [between Maryland and Virginia], going in opposite directions," for a total of three unrelated numbering schemes on a single road.⁵⁰² Virginia later reduced the schemes to two, first by reverting exits 58 through 61 to their original 1 through 4 (making all Virginia exits consistent), then in 2000 by renumbering exits 4A through 14 as 43 through 57 to become consistent with Maryland, and renumbering exits 1 through 4 as 170 through 177 to

⁵⁰¹ In 1996, Maryland altered its signage on I-270 south, which previously had directed Washington-bound traffic to head east on the Beltway (and then south on Georgia Avenue), to point those drivers toward the George Washington Memorial Parkway in Virginia. See Manuel Perez-Rivas, "Md. to Tell I-270 Drivers to Take Scenic Route to D.C.," Washington Post, 11 October 1996: B8.

⁵⁰² "Beltway Bandits" [editorial], Washington Post, 29 April 1981: A24.

once again become consistent with Interstate 95. By 2001, then, most of the Beltway was marked by exit numbers running from 2 through 57, with the Virginia segment between I-395 and U.S. 1 marked separately with numbers running from 170 through 177.⁵⁰³ Local and out-of-town drivers were, of course, expected to follow all of this.

If the control cities and exit numbers were not enough, the Beltway's route number itself compounded the confusion further. Originally the Beltway was Interstate 495 alone. But after the portion of Interstate 95 slated to pass through Washington was cancelled in 1973, area officials in 1975 renamed the eastern half of the Beltway as I-95 to maintain that highway's continuity, and removed the I-495 designation from that portion of the Beltway to reduce confusion. Instead, even motorists familiar with the road had trouble negotiating a single highway with different numbers in different places, a nightmare for giving directions or staying on track.

Virginia and Maryland officials agreed in 1987 to mount on Beltway signs a new Capital Beltway logo in red, white, and blue, with an image of the U.S. Capitol surrounded by a circle. But these logos were inconsistently placed and in any case were not available to out-of-town drivers trying to make sense of the 95/495 conundrum on a map or on a set of written directions.⁵⁰⁴ Finally, the American Association of State Highway and Transportation Officials, which oversees Interstate numbering schemes,

⁵⁰³ Ron Shaffer, "New Beltway Exit Numbers Won't Have You Scratching Your Head," Washington Post, 16 October 2000: B1.

⁵⁰⁴ John Lancaster, "New Signs to Put Beltway on Road to Easier Travel," Washington Post, 8 October 1987: B1.

approved a request from both states and the District in 1991 to renumber the entire Beltway as I-495 while keeping the eastern portion as I-95.⁵⁰⁵

As it turns out, the Beltway's signs were not only confusing from the start, but physically threatening as well. William Shook recalls an aspect of the original signs in Maryland which was never publicized: they were potential guillotines.

We had a design problem with the big sheets of aluminum that go on each side. . . They were supposed to be attached to the framework with stud bolts, studs welded to the back of the sheet of aluminum. And I received a call one Sunday at home, that a couple of sheets had dropped off a sign on Connecticut Avenue at Jones Bridge Road. And had fallen. It appeared to be a problem. So I immediately got hold of the consultant who was doing the work there and our construction people that afternoon, and the contractor.

In the afternoon we had an emergency meeting about it, what's going on, and got to looking and inspecting other signs, and found on a number of them . . . these stud bolt weldings had failed. We had a real problem, cause one of these sheets of aluminum could come down, it could cut a car in two or a person in two. We had, immediately, the contractor, the next morning . . . had another meeting and came back in with a proposal to drill through and put bolts in all of these signs and using a round-headed bolt head, with the same color as the sheet. . . . That [original] design was very quickly abandoned, in the name of safety.⁵⁰⁶

As Shook suggests, highway officials in both states struggled from day one to make ongoing improvements to the Beltway's signs. Maj Shakib, in 2001 the SHA's assistant district engineer for traffic in the area including the Beltway, points to continuous adjustments in making signs more reflective (new materials), more readable at night (new lights), more easily readable in general (larger signs, revised wording). State officials, Shakib notes, repeatedly evaluate existing signs, in an attempt to "place [them]

⁵⁰⁵ Ron Shaffer, "Amtrak Guard Leaves Metro Riders Out in the Cold," Washington Post, 8 February 1991: E1; Howard Schneider, "Beltway Heads Toward a Unified Designation: I-495," Washington Post, 18 April 1991: C1; Stephen C. Fehr, "Vote on Numbering Will Mean a Less Loopy Beltway," Washington Post, 11 June 1991: E1.

⁵⁰⁶ Interview with William Shook.

strategically so that it would give you enough time to read and comprehend and react to the particular situation on the highway." By 2001, signs in both states had accounted for some of the worst problems raised in 1964, but the many concerns raised by the responses to my survey suggest that they have farther to go.

Why does it matter? Confusion, which can be fueled or quelled by signs, has serious consequences. At best, Beltway confusion generates a waste of time, both for the dozens of people who wrote in their surveys that they had accidentally circumnavigated the Beltway, and for the police officers and maintenance workers who (as several told me) cannot count the number of times frustrated drivers have stopped to ask for directions. At worst, confusion sparks danger, as Washington Post editors suggested in 1974:

Most of the regulars have become expert Beltway navigators. Truck drivers, however, seem both bewildered and in an awful hurry. The heavy skidmarks attest to that. For tourists, who are strangers to our complex geography, the Beltway is a nightmare, full of hair-raising surprises, and demanding of them sudden and unexpected decisions as to which route to take.⁵⁰⁷

The confusion also places a drain on public resources. Although both states have placed intermittent "Inner Loop" and "Outer Loop" signs on alternate sides of the roadway, many drivers cannot identify which side they are on or in which direction they are driving at any given moment. As a result, emergency crews responding to accidents must err on the side of caution and cover all possibilities. Patrick Stanton of the Kensington Volunteer Fire Department explains:

A party to an accident, they pick up their phone. First of all, they take their eyes off the road, and pick up the phone, dial 911, pound. And then the first thing the

⁵⁰⁷ "The Beltway (II): Signs of Danger" [editorial], Washington Post, 28 March 1974: A22.

dispatcher asks them is, Where are you? And they look around and they go, I don't know. So, that's the worst problem. As a matter of fact, when they run an accident in this county, they--normally when you run an auto accident, they send an engine, a rescue squad, and an ambulance. In this county it's so bad that when they run 270 and when they run 495, they send an ambulance to the opposite side on that section, because so many people confuse the Inner Loop with the Outer Loop that that at least puts one piece on the scene. Because you can't always see all parts of the other side of the road when you're going around. Especially when you're dodging citizens.

Stanton's colleague Loren Hudziak adds:

Typically the calls will come in, and it'll just say on the printout sheet, "There's a collision. Unknown number of people involved, patients or victims." And it'll say between Connecticut Avenue and Rockville Pike. And they don't know whether it's Inner Loop or Outer Loop, so they'll just send units going each stretch, each direction, looking for anything.⁵⁰⁸

Bill McKinney of the Virginia State Police notes that Northern Virginia rescue crews similarly dispatch companies "from both directions."⁵⁰⁹ This informal practice of sending crews to both sides of the Beltway for single incidents, which requires twice as much expense and twice as many resources as necessary for emergency responses, was routine in both states as early as 1972 and was still in place in 2001.⁵¹⁰

Effective solutions, then, could alleviate drivers' frustrations and save money at the same time. Several survey responses suggested that "pictures would be better than words" in explaining clearly to drivers where they are and where they are heading.⁵¹¹

An Arlington resident believes "it would be easier if there were a picture of a circle with

⁵⁰⁸ Interview with members of the Kensington Volunteer Fire Department.

⁵⁰⁹ Interview with Bill McKinney.

⁵¹⁰ Nancy Scannell, "Beltway Accident Locations Confusing," Washington Post, 3 April 1972: C1. See also "Beltway Locations Should Specify 'Inner' or 'Outer,'" Fairfax Herald, 31 March 1972: 1.

⁵¹¹ Beltway Survey #88.

like some sort of an 'X' showing you where you were, so you could judge if you needed to go 'north' or 'south' (or 'east' or 'west'). This would be MUCH more helpful."⁵¹²

Takoma Park resident Rachel Miller describes an idea which "would be especially helpful to visitors":

I recommend additional signs posted around the Beltway which place where you are on a clock face. And, of course in one direction it might say "You are at two o'clock heading counterclockwise." Then you could look at a map and figure out that your destination is roughly 10 o'clock, and know that since you are at 2 o'clock and heading counterclockwise, you are heading in the right direction and get at least a general idea of how far you have to go. North/south/east/west doesn't work all that well on a big, squiggly circle.⁵¹³

The Inner Loop/Outer Loop or clockwise/counterclockwise distinction remains confusing even within these recommendations. A more prominent and distinct identifier for each side of the Beltway could help here: For instance, if one side were marked at very short intervals by a red star and the other side by a blue square, drivers could become attuned to, and could give directions by, whether they are on the "red" or "star" side or on the "blue" or "square" side. Solutions like these are unorthodox, but perhaps necessary in light of decades of unnecessary expense and resources resulting from continued confusion.

Those improvements, and in fact every physical addition and alteration to the Beltway discussed in this section to this point, are for the benefit of drivers and passengers. Almost none of the objects placed on, along, or above the Beltway work to the immediate benefit of people living near the Beltway, or to those who have nothing to do with it (whom I discuss at the end of this chapter). The one artifact the Beltway's

⁵¹² Beltway Survey #274.

⁵¹¹ Beltway Survey #586.

neighbors have working in their favor are sound walls, and even these are problematic, as indicated earlier by Lisa Loflin's family's experience.

In what amounted to an acknowledgement that the Beltway is a multisensory phenomenon, as per the cultural landscape fieldwork model's first operation, Virginia began mounting sound barriers in 1975. Highway officials and residents alike were confident that the concrete, metal, and wooden walls would block much of the Beltway's noise from people living immediately adjacent. In 1975, neighbors hailed the barriers as a "godsend" and "great." By 1979, as one Franconia resident put it, nearby residents thought the \$875,000-per-mile barriers were "not worth two cents": "The blue metal barrier has ruined my view. We've still got the noise but nothing to look at. We had no idea it would be like this."⁵¹⁴ A Fairfax resident wrote that

A friend recently visited from North Carolina, and on his way couldn't help noticing the misproportioned metallic walls lining the Capital Beltway in Fairfax County. His first question was whether they were erected to hide a vast expanse of ghettos or scrapped autos. When I replied that they were "sound walls" for local residents, he chuckled. When I informed him that they had proven totally ineffective, he laughed aloud. And when I told him the project was costing \$8.5 million, he simply shook his head—just like the rest of us.⁵¹⁵

Maryland officials similarly erected intermittent sound barriers in the 1970s and 1980s, with mixed reactions; even given the walls' deficiencies, some residents near Cabin John were so desperate to reduce noise from the Beltway that they offered to pay

⁵¹⁴ Sharon Conway, "Beltway Noise Persists," Washington Post, 4 May 1979: B1; Douglas C. Lyons, "Noise Barriers to Raise Beltway Cost," Washington Post, 5 June 1975: B1; David L. Adams, letter to the editor, Washington Post, 21 June 1975: A13; Douglas C. Lyons, "Dirt Barriers to Smother Beltway Din," Washington Post, 21 August 1975: C3.

⁵¹⁵ Thomas F. Qualey, letter to the editor, Washington Post, 30 July 1979: A12.

special increased taxes if only they could get sound barriers.⁵¹⁶ The state revised its policies in 1997 to make it easier for residents to petition successfully for barriers, but the multiple criteria for qualification—an average 66 decibels of noise, reduction of sound in a community by at least ten decibels, sufficient pre-existing right-of-way, residential community predating the 1964 construction of the Beltway, houses close enough together that the wall's cost will not exceed \$50,000 per house protected—still keeps them out of reach for some.⁵¹⁷

Among the artifacts along the Beltway, sound walls stand out overwhelmingly as the ugliest aspect of the highway, in the results of my survey. While some respondents acknowledged the need for the barriers to benefit abutting landowners, many more complained that the walls blocked their view of the world beyond and created a dangerous sense of tunnel vision. The barriers, in that sense, join the other objects on and above the road as potential safety hazards. While highway officials focus primarily on safety and danger and only secondarily on aesthetics in dealing with the Beltway's vegetation and weather, they do the same to a more pronounced degree in creating and altering the Beltway's built environment.

For the individuals who are charged with preventing and responding to hazardous situations on the Beltway, aesthetics drops out of the picture entirely. Signs,

⁵¹⁶ Jo-Ann Armao, "Montgomery Group Offering to Pay Higher Taxes to Lower Beltway Noise," Washington Post, 15 January 1991: B1.

⁵¹⁷ Charles Babington, "Glendening Answers Call for More Sound Barriers," Washington Post, 17 June 1997: B1; Hal Piper, "Muffling Beltway Noise," Baltimore Sun, 18 December 2000: 1A; Virginia Beauchamp, "City Council Gets an Earful on Nonstop Beltway Noise," Greenbelt News Review, 29 November 2001: 1. See also Karl Vick, "Project Has Family Living on the Edge," Washington Post, 19 July 1995: A1.

additional lanes, overhead lights, low-cut grass, and carefully designed drainage systems can diminish the Beltway's dangers (though not necessarily the public's perception of those dangers, as I will discuss in Chapter 8), but cannot eliminate them altogether. Engineers and environmental planners design the safest, most efficient, and in some cases most pleasant-looking highway they can; a different group of professionals then inherit the results. The next section focuses on how traffic controllers, police officers and emergency rescue workers approach the Beltway and deal with its dangers (which in most cases they did not create) and their repercussions.

Living on/with the Beltway

Residents of neighborhoods bordering on the Beltway, as described in previous chapters, consider the road to play a more central role in their daily lives than in those of other commuters, who only need negotiate it briefly each day. Other groups too, including traffic controllers, maintenance workers, construction crews, police officers, and emergency response teams, integrate the Beltway as a focal point in their own lives.⁵¹⁸ "Of the eleven, almost twelve years I've spent as a trooper, it's my office," says

⁵¹⁸ In this section, I focus on members of three of those groups. For descriptions of construction crews and the challenges they face on the Beltway, see Janis Johnson, "The Ironworkers' Two-Hour Beltway Ballet," Washington Post, 19 October 1977: C1; Tim Larimer, "Road Warriors," Washington Post Magazine, 22 August 1993: 21-23, 33-35; Steve Vogel, "For Overnight Road Crews, Job is Paved with Danger," Washington Post, 19 September 1995: B1; and Frank J. Murray, letter to the editor, Washington Post, 18 November 1976: A18. For a dated discussion of the bridge tenders on the Woodrow Wilson Bridge, see Paul Hodge, "When a Bridge Tender's Ship Comes In, It Can Mean Some Angry Motorist is Gunning for Him," Washington Post, 7 October 1976: D.C. Weekly, p. 10. For an overview of Virginia police efforts to track speeders from

Maryland state police officer Russell Newell. "Some people will use it to and from but never really see it as intimately as I would 'cause that's where I worked." In this section, I draw on interviews with police officers and emergency response teams and describe my observations of a team of traffic controllers to see how they approach and respond to their "office," in Newell's terms.⁵¹⁹ I begin in a darkened room on a hillside overlooking the Pentagon.

3: 08 p.m., Tuesday, January 23, 2001. Tyrone Young and I are sitting behind the control panel for the 22-mile Virginia portion of the Beltway, as well as the Woodrow Wilson Bridge and part of the commuter Dulles Toll Road. To our right is a second workstation, also a collection of four monitors, two keyboards, and several phones, where Nakia Faison sits monitoring traffic on Interstates 95 and 395, the major highways heading south from Washington, D.C., into Virginia. Next to her, Clarence Williams sits at a third station, keeping track of Interstate 66 to the District's west. At a separate island in front of Young and Faison, Harvey Ingram quietly speaks into the

airplanes, see Josh White, "In Va., a High-Flying Crackdown," Washington Post, 28 February 2001: B5.

⁵¹⁹ Citations in this section following the ethnographic vignette draw on interviews with Loren Hudziak, Murray Hunt Jr., Robert Spence, Margo Stanton, Patrick Stanton, and *Leslie Treistman of the Kensington Volunteer Fire Department, 29 January 2001; veteran officer *Ethan Gould of the Greenbelt municipal police, 2 February 2001; Timothy Bell, Rick Blandford, Drew Knight, and Kenneth Plunkett of the Chevy Chase Fire Department, 9 February 2001; Sgt. Russell Newell of the Maryland State Police, 15 March 2001; Cpl. Lorenzo Miller of the Maryland State Police, 16 March 2001; and Master Trooper Bill McKinney of the Virginia State Police, 24 April 2001. Following ethnographic convention, I cite these informants extensively in their own words in an effort to understand, through the words they use, how they make sense of their experiences dealing with the Beltway.

phone, taking calls from drivers and other Northern Virginia residents anxious to report on road-related concerns. A final station next to Ingram is vacant.

Dim overhead lights provide the only illumination beyond a movable-neck desk lamp at each of the five workstations and the glow of dozens of monitors. While the front wall of the room, about 25 feet long by 10 feet high, is covered by video images of the highways being monitored, there are no windows and no indication of the time except for an LED readout over the central panel. With only the murmur of soft phone conversations and the hum of computer equipment to break the silence, this hardly seems like a high-energy place. But Young has assured me that it is.

3:11 p.m. VDOT supervisor Carlene McWhirt enters the room—fast—from her glass-enclosed alcove to the right. "Tyrone, one, two, three, four, seven, accident on I-95 south, all lanes blocked." Next to me, at the rear left of the room, Young quickly opens a binder of highway codes and procedures as McWhirt crosses the room, behind the workstations, walking towards us. McWhirt's message needs to be mounted, immediately, on VDOT's variable message signs, numbers one, two, three, four, and seven, and at this moment, Young is solely responsible for making that happen; otherwise, within minutes, thousands of drivers will hit a dead stop on their commute with no advance warning. "Is that southbound?" he confirms, working on the codes.

A phone rings. "Here they come!" Young shouts.

"Is anyone responding?" McWhirt asks, now standing behind Nakia Faison at the rear center of the room.

"Number 16 is on the way," Clarence Williams calls from her right. All three technicians, including the ones monitoring the other interstates, have quickly shifted their attention to this incident on Interstate 95 immediately adjacent to the Beltway.

Carlene leans forward toward a two-way radio microphone. "STC 9017," she says, using the abbreviation for the Smart Traffic Center, the facility from which the team assembled around me and their colleagues monitor and control traffic on the highways of Northern Virginia.

"Sixteen, where's your location?" crackles a voice on the radio.

"Okay, I'm at the 495/95 entrance ramp. It's backed up all the way here," a second voice says. Tyrone is frantically trying to copy down information, craning toward Faison's radio on his right while cradling a phone in his left ear.

McWhirt speaks calmly. "All right, at this time they have all the mainline lanes blocked and are routing people around. It involves a tractor-trailer and a bus. Several tractor-trailers, I believe, and a bus."

"How many lanes blocked?" Harvey Ingram asks from the front of the room.

"All."

"All the lanes blocked," Harvey repeats. He enters a few keystrokes and a dot-matrix printer behind McWhirt begins to buzz and print.

As I listen and watch, the room still fairly quiet despite the rising intensity, I realize that there is an enormous tie-up in progress at the Capital Beltway and Interstate 95 in Springfield, not too far south of where I'm sitting next to the Pentagon and Arlington National Cemetery, and that these five people speaking softly to each other next to me hold in their hands the difference between a short backup and hours of

standing still for thousands of drivers over the next few hours. How many drivers have had their afternoon and evening plans disrupted in just the last five minutes, I wonder.

"Major, major," McWhirt says. "It's got a bus and a truck and I don't know what else." She turns to a higher-ranking VDOT staff member who has entered the room.

"All southbound lanes are blocked."

"Will we have to lift HOV?" he asks, referring to the high occupancy vehicle restrictions requiring vehicles in certain lanes to carry a minimum number of people during peak commute hours. McWhirt suggests routing all traffic onto the HOV lanes because the main highway lanes are blocked by the accident.

"Anyone notified the media?" Ingram asks.

"Yeah," Williams says from across the room.

"All of them?"

Next to me, Young is furiously combining and editing pre-recorded messages to mount on variable message signs. A monitor in front of him reads

ACCIDENT I-95 S

AT SPRINGFIELD

ALL LANES BLKD

"It's back to the Beltway now," McWhirt says, referring to the stopped traffic.

"That's not far," her supervisor says.

"No, but it just happened."

3:18 p.m. Young gets up and starts typing on a computer at the back of the room. The Virginia Operating Information System will notify VDOT's central office in Richmond, across the state to the south, what is happening at the incident site. Everyone

else's eyes are on the projection wall at the front, which is divided into three large panels. The left panel (in front of Young) is split into four images, showing flowing traffic from cameras around the Beltway; the right panel (in front of Williams) is split sixteen ways. But the central panel shows a single, huge image of two jackknifed tractor-trailers under a bridge, with a parking lot of cars trailing off behind them into the distance.

The action is now centering around Nakia Faison's workstation at the rear center of the room, where McWhirt and her supervisor already stand. Jimmy Chu, director of the Smart Traffic Center, has joined them, and two other VDOT staffers have quietly come in and have sat down at the back of the room to watch the show. McWhirt speaks into the radio: "At your earliest, can you advise the duration of this incident and also what's involved?"

Chu says, "Maybe not major, maybe—"

"It's got to be," McWhirt says. "That's two tractor-trailers involved."

The supervisor walks to the front of the room and squints at the oversized image of the accident. "What's that?" he asks, pointing to a blob in the middle.

McWhirt takes over the controls at Faison's workstation and zooms in. "It's two tractor-trailers and a single vehicle. One tractor-trailer has jackknifed."

"It must have been traveling 70 miles an hour," Chu offers.

"They're working on the scene," McWhirt announces. She and three others confer, and decide not to lift the HOV restrictions—yet.

3:26 p.m. Three more men have entered the room and now everyone has an opinion to offer. On the radio, a crackling voice asks McWhirt how the HOV lanes are

doing; still okay. She is speaking constantly to a stream of people on the two-way radio and one of Faison's phones; beside her, Faison works a pair of keyboards.

"Who's working on the Beltway? See if we can send traffic to Van Dorn Street," Chu says to no one in particular.

At the monitor in front of me, Young enters

USE I-95 NORTH

TO VAN DORN

TO AVOID DELAY

and sends it out to the appropriate variable message signs. The dot-matrix printer clicks into action, keeping a verifiable record of every action taken.

The situation seems to be worsening. "Still totally closed!" Chu shouts.

"Okay, send 'em," McWhirt says.

One visitor says, "It's only gonna get worse in half an hour."

"Someone call Metro Traffic," says a second visitor.

"Call State Police," says a third.

3:34 p.m. On the phone to the Virginia State Police, McWhirt says, "We're going to lift the HOV restrictions on 95/395 because we have an accident. Okay." She turns to the rest of the room. "They don't have a problem with it." Chu picks up a phone and makes several calls.

The visitors are on their way out. I wouldn't otherwise know it, but the exciting part must be over; the incident must be under control.

McWhirt is back on the phone. "Just wanted to let you know we've lifted HOV lane restrictions. There will be major, major delays."

"I already called State Police, Fairfax, and Arlington about lifting restrictions," Chu says.

The other supervisor sighs. "Okay, that's fine. That's all we can do."

3:43 p.m. The room is as quiet as it was a half hour ago. The Smart Traffic Center has done its job; now it's up to the crew on scene to deal with the situation. On the radio, police on the scene are talking to each other: "We're stretched awfully thin here." One trooper moves up on the scene to help another.

Young says, "All those signs are up, Carlene."

The radio crackles. "It should take us no longer than 40 minutes for us to clear this scene. It's two tractor-trailers and a truck."

"Ten-four," McWhirt confirms.

3:47 p.m. On the radio, we hear an announcement to the public that there is a separate, major accident at Gallows Road and the Beltway to our west. Then a voice cuts in from the tractor-trailer scene: "They're going to have one of the lanes open in five or ten minutes, I think."

I look next to me at Young for any signs of satisfaction, but he's kneeling on the floor with the phone cord stretched to the limit behind him, trying to spell correctly someone's name who has called to request a tow and who apparently is speaking too softly. The cord knocks his reference binder to the floor and I pick it up. Above us, Young's monitor is flashing the special variable message sign announcements he's mounted near the Wilson Bridge. Another phone rings, and now he has a phone in each ear as he takes a report of a downed stop sign: "Thank you, sir." Clearly Young's responsibilities stretch beyond the Beltway and the Wilson Bridge.

3:54 p.m. The radio comes on. "I need you guys to stay near the radio. We're going to open this road back up."

3:59 p.m. Young had joked earlier with me about how when it rains, it pours: the room will be unbelievably hectic, then dead silent. "See, now it's all quiet!" he exclaims. I tell him, "I was waiting for the third phone to ring, when you already had one in each ear."

4:01 p.m. "It's okay to reopen the road," the radio announces. "Ten-four," Faison confirms.

"It's all clear," she repeats to the rest of the room. "All clear," Young echoes. He walks over to the Virginia Operating Information System to notify Richmond and then Transcom, a regional traffic reporting service, before sitting back at his workstation. "Now I've got to take my signs back down," he says, as he reaches for his keyboards.

"They're doing rolling roadblocks," McWhirt explains to Faison to our right. Police on the scene are opening traffic a few lanes at a time so all the drivers don't jam up at once. McWhirt and Young discuss what updated information to put on the variable message signs: announce a delay, congestion, or leave them blank?

4:07 p.m. "All lanes are open," the radio blares.

"I called Metro, 1-800-TRAFFIC," Faison says.

"I'll call Transcom," Williams says.

Young says, "I think it's been taken care of."

4:08 p.m., one minute exactly after the major incident has been cleared. The phone rings next to Young. "Whoa! Oil spill. And that is where?" McWhirt quickly picks up a second receiver. "Oh, ma-an. I'll see what I can do for you," she says. "Where

are you, northbound or southbound?" She gets back on the radio: "I need a sand truck with a spreader for an oil spill on the scales."

Before turning their full attention to the oil spill, Young and McWhirt take a last, quick look at the center panel of the projection wall, which is still showing the site of the tractor-trailer accident. "The delays are gone!" McWhirt shouts. Young adds, "Just like that, they've all gone away."

I check my watch and the LCD time display over the central panel (with no windows, it's hard to mark the passage of time). The entire episode took one hour, on the dot. The visitors are gone, Chu has returned to his office, and beyond McWhirt's and Young's quiet dialogue about the oil spill, there is no sign of the excitement of the last sixty minutes; Ingram is back to taking calls, Faison is watching I-395, and Williams is checking out I-66. No excitement—and yet I wonder, in the last hour, how many thousands of drivers on the Beltway and on I-95 and I-395, and how many people sitting in their offices and homes listening to traffic reports, just had their day rearranged by what happened around me in this hidden room overlooking the Potomac River.

The Smart Traffic Center team, I learned, plays a key role in keeping the Beltway operational; however, the team members generally do this from their bunker-like headquarters. In contrast, the police officers and fire and rescue personnel who service the highway spend much more time on the road itself. Timothy Bell of the Chevy Chase Fire Department (CCFD) explains that "we're just there all the time! It's so many times that it all runs together now. We're there almost every shift. Guaranteed. It's

a given." His colleague Rick Blandford agrees: "There's not one place on there we haven't walked. We've walked every part of it. . . . Every day, one of us [the local firehouse crews] is on that Beltway for something." "Something," in most cases, is one type of accident or another. It is the CCFD and Kensington Volunteer Fire Department (KVFD), along with similar teams stationed around the circumference and the assistance of state and local police officers, who deal with the results of the dangers posed by the many components of the Beltway.

Not surprisingly, my conversations with the officers and rescue crews revolved heavily around safety, especially the hazards posed by dangerous engineering and poor driving behavior, and the danger to themselves. Underscoring its hazards, Blandford points out that the Beltway's number itself—495—correlates alphanumerically to the letters D, I, and E. Certain portions, however, are more dangerous than others. CCFD crews make daily appearances at two particular sites, Bell explains:

We are . . . in that area, in that stretch, we'll be there—we'll be there at rush hour. Like clockwork. Sometimes during the mornings, but in the evenings it's a given. It's a given. We'll be on the Inner Loop between Connecticut Avenue and Georgia Avenue, or the Outer Loop between Connecticut Avenue and Rockville Pike. And most likely it'll be the Outer Loop.

On that Outer Loop stretch, the CCFD's "hot spot" is the split between the Beltway, I-270, and Rockville Pike/Wisconsin Avenue—the same Pooks Hill interchange so problematic since before it opened. "People cannot freaking get it straight," Blandford says. He points directly to a confusing sign which alerts drivers that two right lanes will exit onto I-270, but the rightmost lane has a yellow "Exit Only" arrow and the adjacent lane does not.

People just can't get it. Because it'll say "This Lane Only" with the yellow arrow, but actually it's two lanes. They think they have to get over; that's when they

create the hazard. . . . The sign that says "This Lane" really freaks everyone out.

Both sides of the junction itself present their own problems. On the Inner Loop on the east side, traffic joining the eastbound Beltway has to merge from the left into the leftmost lane before the extra lane created by the exit ramp disappears. This, Patrick Stanton of the KVFD explains, is a recipe for disaster:

When 495 and 270 merge, it's ridiculous. Because you have to have one lane that people can merge into that runs about halfway to Connecticut Avenue. Just as that lane ends, the road makes a sharp curve one way and curves back the other. So you have people zipping down that lane, who are supposed to be merging, but instead they're gonna run all the way to the end, and stop. So they can try to worm their way while these other cars are supposed to be driving at speed.

While vehicles have to merge at high speeds on the east side of the interchange, they have to deal on the west side with what CCFD members call the "truckers' graveyard," the shoulder to the left of the exit ramp for Wisconsin Avenue. At this point, the Beltway's mainline narrows to two lanes eastbound, with a third lane (the right lane) serving as an "Exit Only" ramp. Between drivers' confusion and the road's curvature, Blandford says, crashes occur there regularly, especially with trucks which have more difficulty negotiating the curve:

Every time, when they come down through here, people have to get over because the lanes change a lot right here. It's between Old Georgetown and 355. Right before you get to that exit ramp at 355. The whole left side of the shoulder is a graveyard. . . . They take that guardrail out—that guardrail's shiny, they replace it like every month.

The curves of the "Roller Coaster" section between Connecticut and Wisconsin Avenues (the former "disappearing parkway") are particularly dangerous, CCFD and KVFD members point out, because drivers take them at unsafe speeds. But Greenbelt officer *Ethan Gould argues that straight road segments are equally dangerous because

they encourage drivers to believe erroneously that they can speed up without danger. It's "almost like a race track," Gould says, referring particularly to Prince George's County stretches outside the KVFD's and CCFD's jurisdiction.

There are so many stretches of the Beltway that even though they're not perfectly flat, cause you've got little rises and stuff, they're fairly straight. I mean, from Kenilworth Avenue down to 202. You kind of go downhill a little bit to the parkway, you come up the rise, you go back down, then you have a bigger rise past 450, and then from 450 straight down to 202 or 214. For the most part, even though it bends slightly, you don't have sharp curves or stuff. I think it's the physical layout of the Beltway that can allow people to drive at high speeds.

But more than the relative curvature of the Beltway, KVFD members believe, its very composition as a paved highway carrying high-speed traffic contributes to its danger, because drivers do not understand how hazardous a basic rainfall is. Motorists do tend to slow down and compensate for downpours or heavy snow, but not for a light rain.

Accidents result, the KVFD relates:

Patrick Stanton: I mean, the problem with such a volume of traffic there, you end up with so much stuff on the road there, that as soon as it begins to rain, the first ten to fifteen minutes of rain, they literally, they oughta just put a big stop sign up to stop everybody. Because that's when the oil and all starts to come up out of the roadway. And some parts of the Beltway--I mean, I can remember getting out of the ambulance when it was just a light, misty rain or whatever, and literally almost slipping and busting your butt. Because the road gets that slick in some spaces.

Robert Spence: That oil is just coming up.

P. Stanton: It's slick.

Korr: Do you see a lot of incidents happen as a result?

Margo Stanton: Oh, yes.

Loren Hudziak: First 15 minutes.

Spence: If it starts to rain lightly, you can hear the calls start to come in.

P. Stanton: You can track the rainstorm, if you know where the fire houses are, because you start to hear the accidents come in in those areas. And it's literally, you can picture it in your mind, coming across the county. Because that's the way the calls start.

M. Stanton: And then when it hits us, then that's when we're so busy.

The danger posed by rain on road surfaces is not limited to the Beltway, but it does compound an already hazardous situation fueled by other factors. Consequent accidents leave drivers and passengers in need of assistance, which the CCFD, KVFD, and other rescue teams must often struggle through heavy traffic to provide.

The injuries they find range from negligible to severe, but both extremes leave indelible memories for the emergency teams. Patrick Stanton describes an incident drawing an emergency response, but where the damage to the motorcyclist involved was more humorous than life-threatening, as

the funniest [call] I ever ran there [on the Beltway]. We had a guy who laid his motorcycle down in one of the [lanes]. We pulled up on the scene, myself and a friend of mine, Sean Green, who's a lieutenant downtown now. We got out of the ambulance and the guy was standing there talking to the police officer, and we were over on the fast lane side. And we asked him if he was okay, he said, yeah, I'm fine, I just laid my bike down, I feel so stupid. We're like, don't worry about it man, it happens down here all the time. He says, I gotta go over to check on his bike, and his bike was over on the other shoulder. So we're like, okay fine. So he turns around to walk away, and when he does, he's walking like on tiptoes. We look down; the butt of his jeans has been ripped out, and he has road rash all over his butt. So obviously he slid across the four lanes of the Beltway on his butt. So Sean and I immediately doubled over with laughter, as we watched this guy tiptoeing across 495 with his butt-cheeks hanging out with road rash all over them.

In a more somber episode, Rick Blandford relates his experience with a man who stopped on the Inner Loop, approaching the Georgia Avenue exit, to change a flat tire. Apparently he believed he was pulling onto the right-hand shoulder, but at that point,

what otherwise might be a shoulder serves as an actual lane for traffic. As he reached into his trunk for his spare tire,

an elderly man, going 55 miles an hour, no brakes, hits the guy. Takes both legs off. I mean, it looked like Vietnam, like something you'd see in Vietnam. And it killed the guy. He was alive for a few hours. The person that prolonged his life enough for his family to say bye was, we had a doctor that was out of Navy Med. We run into those people a lot. And he put tourniquets on his leg which stopped it from bleeding out. We got him to the hospital to surgery, and I think he died later on that day.

The rescue workers encounter even more gruesome injuries; Blandford and Patrick Stanton both recall instances of passengers in cars being decapitated and impaled after driving into stationery trucks. Severe injuries, CCFD members note, seem to occur disproportionately in the hours after midnight when drivers are more likely to be inebriated. At all times, though, the emergency response teams must block out their fears and graphic memories, even as they know how much danger they themselves are in.

And they are very aware. "Trucks suck you on by; you can feel it," the CCFD's Timothy Bell says. Blandford adds: "70 miles an hour, and that wind tunnel it creates, it pulls you back in the highway. It's incredible." Despite their best attempts to bury their fright, the firefighters rediscover it when they stand amid traffic. Bell relates his experience assisting a woman whose radiator ran out of antifreeze,

so I went on the side of the truck with a bucket to get some water out of the water tank, to get her enough to get to the service station and put some antifreeze in. Well, I pulled the lever and the water started coming out, and this tractor-trailer went by me. I knew he was doing 80 coming down the front of that hill. And the truck that I was riding in, the fire engine, I felt it rock from the wind. And I shoved it back in [laughs]. I said, You'll be ok, get to the service station. That did it for me right there. I mean, that was tight. Scared, you could hear it coming, see the headlights bouncing, you know.

KVFD members explain more explicitly why they are frightened:

Spence: The first thing that always sticks in my mind is our own safety. Because the Beltway is tremendously dangerous. The only times that I've felt safe on the Beltway was when the Beltway was completely shut down, for a major accident. I'm also an ambulance driver, and whether responding driving or riding in the front seat, it's harrowing just getting to a call many times. . . . It's harrowing getting there. Getting set up is extraordinarily dangerous, because you want to try to block traffic with your vehicle or one of the other vehicles if at all possible. If the police, the state police, are not on the scene yet, it's even more dangerous. So all of these--

M. Stanton: And usually, we're there before the state police.

Spence: Yeah. Probably eight or nine times out of ten, we do beat the state police to the scene. So all of those parts of it are probably the most dangerous parts. Just getting out of the ambulance and determining what you have. You know, I've gotten out of an ambulance where cars have been two feet away from me going 70 miles an hour.

*Leslie Treistman: So have I.

Spence: And that [breaks a smile] scares the living crap out of you!

The firefighters, Spence explains, will do whatever they can to help people involved in accidents, but their own safety is paramount: "The bottom line is, we're gonna be safe first." *Leslie Treistman adds that "you always have to be careful when you're on the Beltway to tell your crew—we tell our crew, anyway—which door they want to get out of, the side door or the back door, thinking about our personal safety." If emergency crews are injured themselves, both they and the people they are trying to help suffer.

Police officers, who also assist at the scene of injuries, are subject to the same dangers. In addition, Maryland trooper Russell points to hazards faced in non-emergency situations, especially from "shoulder runners, the people that drive down the shoulders. They're dangerous. I've been hit by a guy driving down the shoulder."

Greenbelt officer Gould agrees that "that's another big fear of mine, if I ever have to pull onto the shoulder for any reason. You know, having someone slam into the back of

me." The danger is even more apparent when officers leave the relative safety of their vehicles and step out into speeding traffic to halt all vehicles for one reason or another (often to assist in emergency situations). Police conquer this fear, Newell and Maryland officer Lorenzo Miller explain, by reducing the individual officer-vs.-countless vehicles relationship to a one-on-one personal encounter. Newell elaborates:

It's not something you teach necessarily, but it's intuitive. You watch the traffic as it's coming up to you, and you see one that is slowing down because he sees the trooper standing there. And so as he came towards me, I was able to get out into the lane more and get him to stop. And then once he stopped, all the rest of the traffic, the majority of the rest of the traffic, slowed down. Because now we've got a trooper standing in the right lane, and the rest of the traffic is starting to slow down. And I just kept walking backwards and got all four lanes stopped.

Miller describes how his comfort level performing this maneuver has grown over time:

I fear, but I've grown comfortable with it. You have to stop one lane at a time. You've always got to wonder about that one person who's not paying attention to the traffic in front of him. And traffic is stopped, and he swerves to the right or to the left onto a shoulder, and that's where you're at. And you get hit. I know a couple of people who have gotten hit like that. . . . You try to get eye contact with all the drivers, so they can see what you're doing. See, if I don't have eye contact, I won't try to stop that vehicle. I'll move to the next one.

Maryland officers do this, Newell and Miller explain, particularly in cases where an ambulance or fire truck needs to enter or exit an accident scene. But in this and in other aspects of their work, drivers and passengers not directly involved in emergency situations frequently make things difficult by acting in ways which, both the officers and the fire crews agree, show a marked lack of respect for all of those who are involved.

KVFD members, while disheartened, expect this type of disrespect from drivers in general. "It's bad everywhere," Robert Spence says. "But I'd say it's worse on the Beltway." Treistman adds: "My experience is that they are more aggressive on the

Beltway than they are around town. They beep their horns at us to get out of their way. I've had them yell out of their window and curse at me." People who assist by slowing down and moving out of the way of emergency vehicles, Spence says, seem to be the exception rather than the norm. For him, the difference between the Beltway and other roads was apparent immediately: "The first few times I ran the Beltway, I was just amazed at the lack of care, respect, anything else." Russell Newell explains how drivers vent their frustrations on police when, to him, it seems obvious that sympathy is more in order:

It's always our fault. We had a lady walk across the Beltway, that was struck. And she was struck and struck and struck and struck. Actually, unfortunately her body was dragged a great distance. And it started—the lanes are one, two, three, and four, one is closest to the center median—and she was hit in lane two, hit again in lane three, and dragged all the way to the right-hand shoulder. At least a hundred yards. There was, unfortunately, a lot of body parts that had been stripped away, due to the abrasion with the road surface. And the people in the backup just could not understand why we had the entire Beltway shut down. "She's already dead!" Whatever. And they're yelling at me, "I've been sitting here for three hours!" The collision's only an hour and a half old. "I've been sitting here for three hours!" I don't think so, I got here when the first ambulance got here, and I've only been here an hour and a half. So there's the exaggeration. But that was one of those cases where there was nothing we could do.

And we still take the brunt. A lot of what we do in the police business is either give somebody the answer they're looking for, or just ignore it. I'm not going to tell them the gory details about how some family has just lost a family member; all I would tell them is that we're investigating a serious collision, and keep on going. . . . Yeah, always our fault.

Drivers, CCFD member Timothy Bell adds, "scream and holler" at emergency crews even in the middle of a rescue operation. "We're holding them up," his crewmate Drew Knight acknowledges. "But this area, these people have to get where they're going. . . . And that is their main focus." VSP officer Bill McKinney agrees that "there are times when we are the cause of a traffic problem," but finds it frustrating to be yelled at

consistently whether the police have anything to do with poor traffic conditions or not.

The key, the officers and firefighters agree, is to let the shouts and insults slide off.

From their perspective, most drivers and passengers fail to consider the needs of the people involved in accidents and the professionals trying to assist. Maryland officer Lorenzo Miller explains what he sees as a one-sided view:

I've stopped the Beltway many times. And let one lane or a shoulder go by, and seen the attitudes on people's faces, when they drive past. I feel sorry for them, but I've still got to do my job. I've been cursed out. We've had fatals where there's just stuff everywhere. But the people, they don't care. They just want to get to where they're going. Open up the road, I don't care if that person's dead or not. They sit there, they curse you out and use foul language against you. They blame it all on you. You're just doing your job, you're just doing what you have to do to preserve that accident scene.

I just blow it off. I think, it's ignorant people, they just don't know. I would say, if it was one of their family members in the accident, and they needed to shut the Beltway down because they needed to form some type of life-saving, they needed to get the helicopter or something, they wouldn't be arguing about the Beltway being shut down. They'd be like, you can shut the Beltway for my mother, my father, to transport them out of there. They only see it on one side.

But while drivers may have trouble seeing the situation from the perspective of police or EMTs, the officers and emergency personnel, who drive the Beltway themselves in their private lives, have no such difficulty in grasping both sides. KVFD member Loren Hudziak describes his split personality in this respect:

I think ever since I joined, I've kind of come to the realization, not just about the Beltway but about every place: I end up being the people I hate. Like if I'm a pedestrian and I'm walking across the street, I'm, I had the right of way and this person just about hit me. And then when I'm driving, this person just walked out in front of the car--the nerve of them, I can't believe they're doing this. I mean, that sort of extends to the Beltway. You could say all these times, well, these people are cutting people off, and it causes all this, and the rubberneckers cause the accidents. But when I'm that driver--inevitably I'm late for something and you're going a little faster, you cut someone off, and it really conditions you. . . . Again, you end up being these people you hate. You end up shaping yourself to fit the situation.

Patrick Stanton is able to point to the exact moment when he realized that he had switched identities from one of "us" (the driving public) to one of "them" (emergency professionals who make life so difficult for "us" by holding up traffic):

My first call was particularly memorable not because it was so severe, but because it sort of relates back to what I was saying about the animosity that people have toward the accidents; it causes these mile-long backups and people get frustrated. The first one I was on, it was pretty minor. We were just transporting this woman, merely as a precaution. . . .

We were then getting her out of the vehicle, and I was getting some equipment out of the vehicle, and so I turned around and I saw all these people, all these cars going real slow and everybody looking. That was the first time I got that realization that I was on the other side of this. 'Cause for years I used to travel on the Beltway and get stuck in these mile-long backups, hours and hours in the car and you get frustrated and irritated and by the time you get there, you're just at your wit's end. For the first time I realized, man, I'm actually part of the cause of this. This is the reason all of these people are stopping. And ever since then, you just have a certain degree of patience when stuff like that happens. It was really a pretty stark realization.

The firefighters and officers do what they can to try to personalize themselves with the individuals around them expressing frustration—Newell describes giving his lunch to a stranded motorist and her child—but in the long run, they expect they will never be understood by most of the people they may at any time be called on to assist.

What makes their jobs gratifying, in spite of the insults and lack of gratitude, is—at least in part—the satisfaction of helping people in need and the exhilaration that comes from what KVFD members call "good calls." In the following conversation excerpt, after Murray Head Jr. describes his personal "best call," he and his colleagues explain the contrast between "good" and "bad" calls:

Head: I've had some interesting calls, but nothing--the best call I ran was actually, I was actually coming home from the [training] academy, and I had just gotten off--it was on the [I-270] spur. And I had just gotten off at Old Georgetown to head home. And I was sitting at the traffic light, and they put out the call, "One ejected and a van on fire." So I'm like, I don't see anything. And I

looked up, and there was just this column of fire up in the air. So I was just like, I just blew through the intersection and just headed on down there. And I got behind one of the utilities and followed them in. And one was ejected. I mean, his face--I got pictures if you want to see them. I mean, his face is basically all gone, and it's just this pool of blood. And there's two other guys that are in the back of the van. One of the other guys that was in my class was in front of the utility. He pulled them out. And then the lady that was in the car that actually hit the van, caused it to go into the Jersey wall or whatever, she got out of her car and just wandered down the road. And I had pulled my truck over, and she was laying on the side of the road. And I was like, hello!

M. Stanton: That's our reaction a lot of times. Wah, whoops!

Head: I mean, MDOT, they caught it all on camera and everything like that. That was probably one of the best calls I've ever run.

Spence: You'll have to excuse us. We say "best calls," "good fire." That's in the fire and rescue community.

.....

M. Stanton: Well, we don't have bad calls. We have boring calls.

Spence: Well, we have bad calls if we make 'em bad.

M. Stanton: Right.

Spence: A good call is--

M. Stanton: Something interesting.

Spence: Interesting, challenging.

M. Stanton: Challenging.

Spence: It's probably not good for the victim. But in our--

Hudziak: Sick!

Spence: --vernacular--

M. Stanton: Sick, sick way.

Spence: --it is a little sick, but that's a good call. A bad call to me is when we screw up.

M. Stanton: Right. Which happens.

P. Stanton: We don't specifically wish ill will on the [drivers]. But if it's gonna happen, we'd like to be there.

M. Stanton and Spence: Exactly.

Head: If it's gonna happen, we might as well be there when it happens.

Spence: We are trained to mitigate it, so we might as well go.

M. Stanton: There was a good call, you know, when the MARC train crashed [in a commuter rail accident]? That was a good call. Very interesting. But, I mean, it was devastatingly tragic. I was--that doesn't have to do with the Beltway, but just an example. I had to take leave from the Fire Department for a week because I was devastated from that. And I still close my eyes and see everything from that day. That was a good call. I mean, you don't have those calls every day. Thank God. But, that was experience. That tractor-trailer, the first one I told you about, that was a good call.

Spence: Ones you don't have everyday.

Hudziak: Exactly.

"Good" calls can result from, in addition to the challenging or interesting circumstances identified in the previous conversation, the senses of power or responsibility which emergency personnel feel. "The best time I've ever had on a call," Patrick Stanton recalls, was during a ride when his ambulance had to speed down the wrong side of the Beltway directly into opposing traffic. "Just driving with the lights and sirens on," Treistman adds, "is such a rush. Oh my God. It's also a very scary thought that you've got so many people's lives—you've got the people in the back of the ambulance."

The age of the people involved in an accident can also determine whether it qualifies as a "good" call. KVFD members Robert Spence and Margo Stanton use an episode with an infant to describe how they respond differently when children enter the picture. "We were sitting at the station," Spence relates,

and get a call, a personal injury accident. We had the Inner Loop assignment between Connecticut Avenue, Georgia Avenue, for an accident involving an infant that has been ejected. And so we're thinking, holy crap, here we go, this is gonna be a big one.

M. Stanton: And just to give you a little--any time it's a child, we are--you know, everything is more, your adrenaline is pumping ten times faster.

Spence: These tend to be much more intense, and the situation is--

P. Stanton: You figure the adults get what they deserve.

Spence: That's right. But when you think of it, the kid wasn't driving. So anyway, so we get there expecting the worst. We don't see a kid anywhere. But we see a guy. There's a man laying in the road. Well, he has been ejected from one vehicle, and has slid on his chest about a hundred feet down the road. But amazingly enough, was not that badly hurt. He was drunk, as a skunk . . . but he was not that bad. . . . He had some real serious road rash. But there was a child ejected from another vehicle. The child, an infant, had been ejected into a hillside. Soft landing.

Treistman: Oh my. Guardian angel.

Spence: Yeah. Not a thing wrong with the kid. Of course, we don't--there's no kid! Where's this kid! And the squad, BCC [Bethesda-Chevy Chase] or somebody came up and, "Up here! On the hill! We're fine!" And so, we were pleased, that it turned out the way it did, cause sometimes you do expect the worst on that highway.

Older victims—for example, the man whose legs Rick Blandford saw amputated—
evoke sympathy, but not the same type of adrenaline rush as children.

The police officers I spoke with do not offer the same "good call"/"bad call" breakdown as the fire crews, but do agree with the sense of exhilaration sparked by fast driving and pressing situations. Russell Newell finds satisfaction in being able to help drivers and passengers who need it. Like the fire crews, he experiences a rush from the immediacy and spontaneity of certain situations. One of his most positive memories is of an intervention with a suicide jumper whom he came upon through serendipity. Newell improvised his way through the episode, with gratifying results:

Years ago I was on the Beltway in Montgomery County. And the interesting part of this whole story is, we were working radar. The guy that I get stopped decides that he's going to go all the way across the American Legion Bridge into Virginia, and there is a Jersey wall right at the end of the bridge to take the first ramp to take you onto the George Washington Memorial Parkway. He stops on the left side of the Jersey wall and comes to a stop.

Now I can't back up and go this way to go up my ramp to come back into Maryland. So now I have to go down to Little Falls Parkway to make my loop and come back. The beauty was—the divine intervention, if you will, was—had he stopped 30 feet before he did, or had he stopped on the other side of the wall, I'd have made the loop and I'd have missed this one. But in the time it took me to drive down, hit the loop and come back, this woman had stopped the car, and had walked out onto the American Legion Bridge.

And I'm driving along, coming back into Maryland, and I see this woman walking. Now she had just started walking on the bridge, and I'm thinking, that's a long way to River Road. Doesn't this woman know the phone is four miles from here? What kind of silliness is this? So I pull over and I backed up. And as I start backing up, there's no woman! She's standing—there are little concrete things that stick out on the outside of the Jersey wall that hold up the lights. She has her feet on both sides of the pole; she's got one arm on the pole. She has, in other words, climbed over the Jersey wall, over the water, looking down.

So I backed up, put my car in-between the traffic and her, and got out of the car. And like I'd known her for a hundred years. "Hey! Carol! I'm Russ! What's your name?" So we struck up a conversation. And I worked my way closer and closer and closer until I actually latched onto her arm. And I started talking to her, rubbing her back and this, that, and the next. And anyway, talked her down.

She was at wit's end, and had lost everything, she thought, and she was done. She had left a note; left the car running. She was done. She had taken an overdose. She was actually finished. The note was on the seat of the car and she was going to do it. And I just happened to be there. And had this guy stopped anywhere else, I'd have never seen her because the timing would have been wrong. I'd have tried to come across and looped around, and the extra four or five minutes allowed her to park the car and get out on the bridge. So, I mean, another day at the office.

["Are you trained in that type of intervention," I asked, "or do you play it by ear?"]

Play it by ear. I'm sure that there was something that they had mentioned about that. In this case, it was just all fit into her. In this case. I offered to take her in. "Come live with me. I live in a two-bedroom apartment by myself, my roommate's just moved out." I've got a wife and kids, come on! But what she

needed was to hear that there was some other option than what she was doing. And I was going to give her the option. I was going to give her everything she needed. Everything she needed, and it worked. I stalled her long enough to think about something else, then I started talking to her about next weekend. "Come on, come with me, we can get tickets to everything! I've got tickets to a wine festival in the Shenandoah! You like wine? I love wine!" I don't have tickets, come on. But it worked; she started talking about next weekend, and what she was going to do with me next weekend.

And that allowed the next trooper to get there. And Tony Irons walks up and I say, "Carol, this is Tony. Tony, Carol." And Tony looked at me, and he just started talking to her, and walked up, and the next thing, whoop! Snagged her up off the far side, and that was it. That was just dumb luck, is what that was. That was just taking it as it came.

For Newell and the other emergency personnel I spoke with, episodes like this one go a long way toward negating the frustrations of an ungrateful public, nasty and unskilled drivers, and a road seemingly designed for disaster. Even the dangers to themselves seem worthwhile when they are able to make a difference, or even a potential difference, in helping others live. It is the police and the emergency crews who inherit the results of the engineers' and planners' efforts described in earlier chapters and who must respond to how the Beltway plays out in real life; even as they express exasperation at some of those decisions (particularly engineering ones) which preceded them, they find some satisfaction and excitement in the experiences which the Beltway's danger provides them.

Who's Missing

The Beltway neither serves nor benefits everyone. This may seem obvious, but its reality is obscured by the road's ubiquity in daily discourse in the Washington area and beyond. On local radio stations, traffic reports every ten minutes provide Beltway

conditions to the entire listening audience; area newspapers similarly report on Beltway construction and accidents as matters of general interest. They are, but at the same time a significant chunk of the region's population does not have access to the Beltway the same way they do to, say, the Metro system or to municipal streets. As Takoma Park resident Rachel Miller writes, "the Beltway certainly doesn't help anyone who can't afford a car—in fact, because the Beltway has allowed businesses . . . to meander further and further from the city, the Beltway actually prevents certain people from having these opportunities."⁵²⁰ While the rest of this study focuses on what takes place on the Beltway, it is also important to recognize what doesn't. My cultural landscape fieldwork model defines a site in terms of its natural components, its artifacts, and its people, but it also emphasizes the importance of recognizing who and what does not appear there.

Writing in 1974, sociologist Mayer Hillman noted that transportation planners in England operated under a number of simplified and distorted assumptions, among them the expectation of universal car ownership. This, Hillman argued, was inconceivable. Because the use of cars depends on a host of factors including age, income, and ability to hold a license and properly operate a vehicle, many if not most people would never have a car, and planners needed to provide for that segment of the population as well.⁵²¹ In the United States even at that time, transportation officials did not take such a one-sided view--Hillman likely exaggerated the British planners' stance as well--but then

⁵²⁰ Beltway Survey #586.

⁵²¹ Mayer Hillman, "Not a Carborne Democracy," in Transport Sociology: Social Aspects of Transport Planning, ed. Enne de Boer (Oxford: Pergammon Press, 1986), 160-162.

and more recently did devote far greater attention and resources to roads than to alternative forms of travel. Even the term "alternative" itself points to automobiles as the normative mode.

In so doing, planners and political officials left those whom K.C. Koutsopolous and C.G. Schmidt call the "carless" with fewer and less appealing choices for moving around than those with access to cars. The "carless," they explain, comprise those groups who are entirely or almost entirely dependent on other people for transportation, and who do not have access to a car because of social, economic, and/or physical constraints. These include (and these categories may overlap) the elderly who cannot or choose not to drive, the young who are prohibited from driving, the poor who cannot afford to drive, and the disabled who do not have the physical or mental capability to operate a vehicle.⁵²²

Highway planning and maintenance in Maryland and Virginia does not rule out concurrent governmental funding for other modes which serve the carless. Indeed, both states and their counties and municipalities have for decades put money into regional train and bus service as well as localized bus and van service, hiker-biker trails, and paratransit service for disabled residents. The large share of the pot traditionally allocated to roads does mean that alternative modes, which together serve both the carless and the "carred," may receive less funding than they might if officials' priorities were different.

⁵²² K.C. Koutsopolous and C.G. Schmidt, "Mobility Constraints of the Carless," in Transport Sociology: Social Aspects of Transport Planning, ed. Enne de Boer (Oxford: Pergammon Press, 1986), 170. See also Enne de Boer, "Transport Sociology," in Transport Sociology: Social Aspects of Transport Planning, ed. Enne de Boer (Oxford: Pergammon Press, 1986), 10.

Contrary to my expectations, however, the proportion of transportation expenditures in the Washington area used for highways has in recent years not been much higher than the proportion used for transit. In fiscal year 2001, for example, transportation funding programmed by the District, Maryland, and Northern Virginia favored highways over transit, but only by 56 percent to 41 percent (Table 3).

Table 3.—Transportation Funding Programmed for Fiscal Year 2001 in Washington, D.C., Maryland, and Northern Virginia (as of October 2000, in millions of dollars)⁵²³

<u>Mode</u>	<u>N</u>	<u>Percent</u>
Highway	1,836.3	56.4%
Transit*	1,333.2	41.0%
Rideshare	47.0	1.4%
Bicycle/Pedestrian	37.7	1.2%

* Transit costs include capital and operating expenses, and include expenditures for the Washington Metropolitan Area Transit Authority (WMATA).

In the future, transit expenses may in fact outpace highway expenses. The long-range regional forecast for the 2001-2025 period, developed in 2000 by transportation representatives from Washington, Maryland, and Virginia, projects a total expenditure over that time of \$36,794,000,000 for highways and \$40,007,000,000 for transit, or a 52.1 to 47.9 percent split in favor of transit.⁵²⁴

⁵²³ Metropolitan Washington Council of Governments, Transportation Improvement Program for the Metropolitan Washington Area, FY 2001-2006 (Washington: Metropolitan Washington Council of Governments, 2001), 242.

⁵²⁴ Ibid., 34.

Even with a significant share of public funds allocated to transit, the imbalance of access remains in which transit serves as a viable resource for both the "carred" and the carless, while highways are more accessible only to those with access to motor vehicles. In their 1980 report to the U.S. Department of Transportation on the effects of beltways nationwide, Payne-Maxie Consultants explicitly link the development of beltways to a variety of negative impacts for the poor (and nonwhite, hidden behind the code word "inner-city"):

As do all highways, Beltways primarily serve relatively affluent suburban residents. If expenditures for beltways are shown to hinder the development of efficient transit systems, they may actually decrease the potential mobility of transit-dependent inner-city residents. Further, by facilitating the suburbanization of housing, employment, and shopping opportunities, they serve to lessen their accessibility to the inhabitants of the central city, who are usually disproportionately elderly or members of lower-income groups or ethnic minorities. Suburbanization also reduces the revenue base available for the provision of services to inner-city populations.⁵²⁵

The report adds that the decision to build and maintain a beltway is effectively a decision to help certain people and not others, when other options could help both: "Beltways provide nothing for distressed inner-city communities, which is not true of all transportation investments, an important consideration in this era of shrinking public resources."⁵²⁶

Although Payne-Maxie does not make this point explicitly, other modes of transportation can similarly help certain groups disproportionately. For instance, by December 2001, Maryland's plans for the Purple Line, mentioned in the last chapter and

⁵²⁵ Payne-Maxie Consultants, The Land Use and Urban Development Impacts of Beltways: Executive Summary, 15.

⁵²⁶ Ibid.

intended to supplement the Beltway, had narrowed to two alternatives. Both proposed rail lines terminating in New Carrollton in Prince George's County and running westward into Montgomery County. But the so-called inner line (running inside the Beltway) would be a light rail system and would connect densely populated and poorer communities, while the outer line (running outside the Beltway) would be heavy rail and connect fast-growing business centers and communities. Governor Parris Glendening's decision to back the 32-mph inner line, with projected daily ridership of 34,000, over the 53-mph outer line, with projected ridership of 64,000, favored the poorer residents of inner-Beltway communities over the businesses of outer-Beltway suburbs. The state would contribute public funds to either project, but the favored inner line would be more helpful to the carless, as grateful Langley Park community leaders pointed out after Glendening's announcement.⁵²⁷

Payne-Maxie suggests that beltways are useless for certain groups who would benefit more from investments in other modes of transportation. But the carless are also excluded from drawing on the beltways as a transportation resource in a more straightforward way: They are legally prohibited from using the Beltway if they do not have access to a motor vehicle. Theorist Kimberle Williams Crenshaw has argued that laws or rules which appear to treat people equally may in fact promote inequalities. As an example, she cites a hypothetical restriction which prevents anyone from sleeping under bridges; the restriction has a disproportionate effect on poorer people who have little choice, whereas wealthier people, who ostensibly are also subject to it, would

⁵²⁷ See Matthew Mosk, "Purple Line Breeds More Confusion," Washington Post, 2 December 2001: C1.

never consider sleeping under a bridge in the first place.⁵²⁸ Similarly, laws which exclude pedestrians, cyclists, and equestrians from Interstate highways in theory apply to everybody, but in reality constrain the options only of those without access to motor vehicles. Thus, John Stilgoe writes,

no bicyclist rides the interstate highway, and few motorists zooming up entrance ramps think long about the political message implicit in the No Bicycles signs. The interstate highway system is by law and use a limited-access system . . . it emphasizes that the highway exists not for all citizens but only for those in vehicles suited to it, vehicles capable of the minimum speed of forty-five miles an hour. As the sign says, no bicyclists, no motor scooters, no self-propelled farm machinery, no horseback riders, no pedestrians, period. While all taxpayers contribute to its building and to its maintenance, although motorists pay even more through gasoline taxes, not all taxpayers are welcome in the special right-of-way.⁵²⁹

Pedestrians and cyclists, excluded from the Beltway, have fewer choices for crossing the Potomac River to move between Maryland and Virginia, although the forthcoming new Wilson Bridge will include a barrier-separated pathway for bicycles and walkers. And residents of neighborhoods near the Beltway who want to walk quickly to adjacent communities across the road, as Lisa Loflin notes, are faced with the decision to go far out of their way or to dash, illegally, across the Beltway itself.

Some do. Prohibitions against walking on the Beltway do not stop it from happening entirely, with sometimes tragic results. A Georgia resident, who grew up in Silver Spring near the future Holy Cross Hospital, recalls his friend having the

⁵²⁸ Kimberle Williams Crenshaw, "Color Blindness, History, and the Law," in The House that Race Built, ed. Wahneema Lubiano (New York: Vintage, 1998), 285.

⁵²⁹ Stilgoe, Outside Lies Magic, 89-90. Stilgoe, a New England resident, is apparently unaware of the policy of some rural states to allow the use of bicycles on Interstate shoulders. See, for example, Arizona Bicycle Club, "Bicycling on Freeways in Arizona," online, <<http://www.oneandzero.com/abccazb/interst.html>> (21 February 2002).

"distinction' of being the first pedestrian to be struck by a car (the fences were not up yet) on the Beltway," suffering a broken collar bone, in the early 1960s before the entire loop had even opened.⁵³⁰ On certain stretches of the Beltway, community residents routinely cross the Beltway as a shortcut despite the danger. On a one-mile portion in Oxon Hill, Md., near the St. Barnabas Road interchange, five pedestrians were killed between 1986 and 1992 alone; a Maryland State Police officer noted in 1992 that police issued more \$55 tickets for pedestrian trespassing on that segment than anywhere else in Prince George's County.⁵³¹

Highway officials, familiar with the problem, have been challenged to develop safeguards which will keep pedestrians out. People intent on reaching the Beltway cut through fences and walk around walls, two solutions intended to discourage trespassing. SHA maintenance supervisor Larry Kidwell describes the difficulty of dissuading would-be pedestrians and the typical nonchalance of one girl even after being struck while crossing:

I'm sure you probably knew years ago that a couple of kids got run over trying to cross the Beltway. Now they put up sound barriers down there, and a wall so they can't cross. But they're crossing right up the street where there is no wall, right on the other side of Saint Barnabas. I tell you, we were down there years ago doing a depatching job. We were on the southbound side. And I had a vehicle going on the northbound side that pulled over on the left shoulder, came over to me, and told me that a person was hit, right up in front of me.

So first thing, my instinct was to go up there and find out so that I could get on the radio and get help, whatever we need. So I get up there, and a girl came out

⁵³⁰ Beltway Survey #259.

⁵³¹ Paul Duggan, "Two Killed Crossing Beltway," Washington Post, 21 September 1990: D3; Paul Duggan, "Beltway Fatality Renews Outcry," Washington Post, 21 August 1992: D1; Paul Duggan, Md. to Add Beltway Wall to Stop Pedestrian Deaths," Washington Post, 12 September 1992: B1.

of, I think it's Marlow Heights Mews, or whatever those apartments are right there. And she made it to the second lane, and she hesitated. And a truck hit her. Knocked her from the second lane all the way into the median strip. And I seen her in the median strip and I went over to her. And all she wanted me to do was get her up and get her back across the road. And I tried to talk to her, I was asking her was she hurt, and she was holding her side. And I tried to talk to her to keep her calm. Because as soon as the guy stopped and told me somebody was hit, I got on the radio and told 'em, get a trooper out here, and a trooper came up.

We stood there and we talked to her and talked to her until the medical people got there. And they got her out of there. But the only thing she kept telling me was she needed to go home. And I said, why did you try to cross the Beltway? And she said she was going over to see a friend.⁵³²

Like the girl in Kidwell's story, the Beltway's pedestrians often ignore the danger they face. Silver Spring resident Charles Mercogliano explains that

as a teenager (and a stupid one at that), I would sometimes cross the beltway rather than walk to the nearest exit. This exercise is not for the faint of heart or slow of foot. . . . [W]hen I crossed the beltway on foot, it was usually at night. . . . I'm sure the drivers saw me, but I wasn't looking for their reactions. In looking back, it was probably the most foolish thing I have done in my life. But when you're a teenager, you feel indestructible. I stopped crossing the beltway after witnessing what can happen when a pedestrian doesn't make it across.⁵³³

One solution would seem to be pedestrian overpasses. But former SHA district engineer William Shook, responding at a 1999 symposium to a question about "what thought was given to building pedestrian overpasses, or providing pedestrian facilities on automobile bridges on the Beltway," remembered "very little. We built very few. In fact, I can't think of any offhand on the Capital Beltway [though the Baltimore Beltway had several]."⁵³⁴ Most likely, the original planning process which did not take abutters'

⁵³² Interview with Larry Kidwell.

⁵³³ Beltway Survey #491.

⁵³⁴ "Building the Beltway: The Montgomery Experience."

concerns into consideration also did not focus intently on pedestrians. But even in later years, when the need for overpasses became more acute, physical and social factors discouraged planners from adding them. SHA district engineer Charlie Watkins notes that overpasses are more expensive than they appear (often \$1 million or more), require more space on adjacent land than they appear to need (especially to be built ADA-compliant), and often act as crime magnets.⁵³⁵ While overpasses do work effectively in certain contexts, they are not a panacea for the pedestrian problem.

Cyclists, too, are excluded from the Beltway, but do not try to trespass as frequently as pedestrians. One cyclist notes that the Beltway presents a double whammy: on one hand, bicycle riders cannot use it to move easily between the suburbs, as drivers do; on the other, they have trouble even crossing the barrier the Beltway creates: "I'm a bicyclist. It's very hard to get across the Beltway on a bicycle. There aren't a lot of places you can do it. Unless you're a very confident, comfortable in traffic, urban bicycle rider, you're not gonna—the Beltway's a posted barrier around a ten-mile square."⁵³⁶ Annandale resident Arthur McClinton concurs that "[t]he inability of anyone not already in a car to cross the beltway" makes it a serious physical boundary. "My office is just inside the beltway and my house is outside the beltway. I cannot bicycle from one to the other as the beltway and the lack of pedestrian crossing make it not safe to do so."⁵³⁷

⁵³⁵ Interview with Charlie Watkins.

⁵³⁶ Interview with Douglas Feaver.

⁵³⁷ Beltway Survey #513.

While cyclists do not expect access to the Beltway itself, some argue for alternative considerations to compensate. In May 1999, the Washington Area Bicyclist Association developed and presented to VDOT five principles for a bicycle-friendly Beltway: preservation of every existing or planned low-traffic Beltway crossing, provision of bicycle and pedestrian facilities (e.g., sidewalks and on-road bike lanes) on all arteries crossing the Beltway, grade-separated overpasses or underpasses at locations "where crossing the Beltway at-grade is considered unsafe," bicycle routes parallel to the Beltway on trails and/or low-traffic streets, and interchange designs which are safe and not intimidating for cyclists and pedestrians to cross.⁵³⁸

Even with these provisions, access to the Beltway itself would still be heavily off-limits to people without motor vehicles, although in the 1990s Metrobus initiated service across the Woodrow Wilson and American Legion Bridges. All area residents benefit in some ways from the Beltway's limited-access and its resulting (at least in theory) high speeds; for example, freight and mail trucks and ambulances can move more efficiently on such roads than they can on local streets. Still, as Payne-Maxie's 1980 report points out, other modes of transportation are open to a much broader spectrum of the population. "[I]f you don't have a car or other means of transportation," one respondent writes, "you are limited in your ability to use the beltway to get around the Washington DC area."⁵³⁹ The Beltway and other limited-access highways, and the

⁵³⁸ Virginia Department of Transportation, Capital Beltway Study: Summary Report, Citizen Workshops, June 8, 9, 10, 1999, vol. 3 of 3, comments #302 and #236. See also Bill Silverman, "Bike to Metro?" Washington Post, 19 June 1988: C8.

⁵³⁹ Beltway Survey #256.

prohibitions that attend them, draw on public funding without providing the same level of equal access as other modes.

CHAPTER 8

"THE BELTWAY ALONE WILL KEEP ME FROM RETURNING":

THE CAPITAL BELTWAY AND/IN INDIVIDUAL LIVES

I hate the entire beltway. There is no way to get around this area without having to go in circles. I would love nothing more than a few roads that go in a straight line. I do everything in my power to avoid the beltway and the craziness that accompanies it. —Bernadette Gallagher, Bladensburg, Md.⁵⁴⁰

The significance of a cultural landscape depends as much on how it exists in people's minds as on how it appears in the physical world. The power of thought is the key here: Landscapes are both conceptual and physical. The ways in which people perceive and interpret a landscape—as "wilderness," "beautiful," "dangerous," "useless," and so forth—can have "tangible consequences for how that space is utilized, which in turn affects the behavior of those perceiving the landscape in that particular way."⁵⁴¹ People often make decisions of public policy and personal choice based on their perceptions of a given site, even if they have had limited or no physical exposure to it. Highway engineers can do everything in their power to make a road as safe as possible, but if drivers continue to perceive it as dangerous, then for them it is dangerous even if the danger exists only within their mental construction of the highway.

⁵⁴⁰ Beltway Survey #173.

⁵⁴¹ J. Edward Hood, "Social Relations and the Cultural Landscape," in Landscape Archaeology: Reading and Interpreting the American Historical Landscape, ed. Rebecca Yamin and Karen Bescherer Metheny (Knoxville: University of Tennessee Press, 1996), 122-123.

In this chapter, I turn from the physical Beltway to the cognitive one to explore how the road exists in the minds of the people who use it (or choose not to) and how the Beltway, both material and conceptual, has played an integral part in their individual lives. This discussion directly addresses the cultural landscape fieldwork model's suggestions, in its third operation, to examine the range, development, and implications of perceptions of a given site. The perceived Beltway, in contrast to its physical form, is significant because the ways people think about it determine how they respond to it and how they will or will not pressure political and highway officials to take action concerning it. Before drawing on my Web survey for insight into perceptions of the Beltway, I offer a breakdown of several demographic categories to set out who my respondents were. I then discuss how drivers' beliefs about the level of danger on the Beltway lead to their decisions for whether or not to use it, regardless of the statistical danger they face. After looking at how drivers respond to the frustrations they encounter on the Beltway and other ways in which the Beltway has entered their lives, I conclude the chapter by examining how drastically the road plays a role in major personal decisions.

The Web Survey Respondents

In Chapter 2, I explained that my Web survey of 2000-2001, from which I have been quoting extensively in the chapters since, was conducted as an observational study rather than as a controlled experiment. Because participants were self-selected, and because of other dynamics inherent to this type of research tool as discussed earlier, the

results of that survey are not necessarily representative of any larger group(s); instead, they open a window into the minds and lives of the specific individuals who did respond. Even so, it is helpful to have some idea of who those individuals are.

In all, the survey drew 607 usable responses, though in this study, I have referenced the surveys using a numbering scheme from 1 to 620. Among those 620, six surveys were submitted a second time by their respondents, often to add additional data; in these cases, I numbered both surveys but drew only from the more detailed response. Seven surveys were submitted in the form of single narrative anecdotes rather than answers to the specific questions; I numbered these as surveys, but did not include them in my demographic counts because the respondents provided no demographic information.⁵⁴²

In keeping with anthropologist James Spradley's stance on ethical ethnographic research procedures, I provided each respondent with a range of options for how they wished to be identified. Spradley insists that ethnographers have the responsibility not just to consider but to actively safeguard the rights, interests, and sensitivities of their informants, whose lives they are invading.⁵⁴³ Accordingly, each respondent was required to check one of these three options (I set the computer program to reject the response if no option was checked): "Use my name (or direct identifiers) as appropriate"; "Do not use my name or direct identifiers . . . instead, describe me in

⁵⁴² The following Web survey responses were repetitious, with the prevailing response in parentheses: 60 (59), 143 (144), 166 (164), 209 (211), 237 (240), 456 (455). The following responses consisted solely of a single narrative anecdote: 190, 375, 547, 568, 593, 599, 608.

⁵⁴³ Spradley, *The Ethnographic Interview*, 35-36.

demographic terms (for example, a 27-year-old woman from Vienna)"; or "Do not use my name, direct identifiers, or demographic description."⁵⁴⁴ In the table below, I refer to these three options as "Full identification," "Partial identification," and "No identification." Only a small percentage of respondents chose to completely safeguard their identities.

Table 4.—Extent of Identification Disclosure for Web Survey
(607 responses)

<u>Extent</u>	<u>N</u>	<u>Percent</u>
Full identification	231	38.1%
Partial identification	355	58.9%
No identification	21	3.5%

One of my primary reasons for using a Web survey rather than a traditional paper survey was to cover further physical ground, to reach a more geographically dispersed set of respondents. Indeed, responses came from 22 states and one country in addition to Maryland, Virginia, and Washington, D.C., which provided the bulk of the replies. Interestingly, the respective shares of responses from Maryland and Virginia almost exactly mirrored their respective proportional shares of the Beltway's mileage. In miles, 65.6% of the Beltway is in Maryland and 34.4% in Virginia. Relative to the 530 total responses from residents of both states, I received 353, or 66.6%, of those replies from Maryland residents and 177, or 33.4%, from Virginians.

⁵⁴⁴ In addition, in my face-to-face and phone interviews, I asked each informant to indicate which material they shared with me should remain "off the record." Several did take advantage of the opportunity; I have regrettably withheld those specific contributions from this study.

Table 5.—Residence of Respondents by State
(604 responses)

<u>State of residence</u>	<u>N</u>	<u>Percent</u>
Maryland	353	58.4%
Virginia	177	29.3%
Washington, D.C.	16	2.6%
Florida	6	1.0%
Massachusetts	5	0.8%
New York	5	0.8%
Pennsylvania	5	0.8%
Georgia	4	0.7%
Germany	4	0.7%
Texas	4	0.7%
California	3	0.5%
Michigan	3	0.5%
Indiana	2	0.3%
Missouri	2	0.3%
New Jersey	2	0.3%
South Carolina	2	0.3%
Tennessee	2	0.3%
Connecticut	1	0.2%
Maine	1	0.2%
Minnesota	1	0.2%
North Carolina	1	0.2%
Ohio	1	0.2%
Rhode Island	1	0.2%
Utah	1	0.2%
Vermont	1	0.2%
West Virginia	1	0.2%

From a national context (or international, counting the responses from Germany), the Web survey thus succeeded in reaching out to many individuals who had had prior experiences with the Capital Beltway, but who I would not have reached with a paper survey. I faced a similar dynamic in the Washington area itself. Although the Beltway passes through just two counties in Maryland and one in Virginia (plus an autonomous city), its regular users include commuters from some two dozen counties

stretching far into northern Maryland, western and southern Virginia, and West Virginia. The Web survey was able to successfully draw on these outlying counties.

Table 6.—Residence of Respondents by County or Autonomous City
 Note: Asterisk (*) indicates a county or city through which
 the Capital Beltway passes.
 (604 responses)

<u>County/City of residence</u>	<u>N</u>	<u>Percent</u>
*Mongomery Co., Md.	163	27.0%
*Prince George's Co., Md.	92	15.2%
*Fairfax Co., Va.	90	14.9%
Non-Md., Va., D.C., W.V.	57	9.4%
Howard Co., Md.	33	5.5%
Arlington Co., Va.	27	4.5%
Anne Arundel Co., Md.	24	4.0%
*City of Alexandria, Va.	18	3.0%
*City of Washington, D.C.	16	2.6%
City of Baltimore, Md.	12	2.0%
Loudoun Co., Va.	12	2.0%
Prince William Co., Va.	9	1.5%
City of Fairfax, Va.	8	1.3%
Baltimore Co., Md.	7	1.2%
Charles Co., Md.	6	1.0%
Frederick Co., Md.	4	0.7%
Calvert Co., Md.	3	0.5%
Carroll Co., Md.	3	0.5%
Harford Co., Md.	3	0.5%
Stafford Co., Va.	3	0.5%
City of Richmond, Va.	2	0.3%
Spotsylvania Co., Va.	2	0.3%
St. Mary's Co., Md.	2	0.3%
City of Charlottesville, Va.	1	0.2%
City of Falls Church, Va.	1	0.2%
City of Radford, Va.	1	0.2%
Grayson Co., Va.	1	0.2%
Jefferson Co., W.V.	1	0.2%
Prince Edward Co., Va.	1	0.2%
Queen Anne Co., Md.	1	0.2%
Rockbridge Co., Va.	1	0.2%

A further breakdown of respondents by city or town of residence indicates a geographic spread across the Washington region. In the table below, an asterisk (*) refers to cities or towns inside the Beltway, a caret (^) refers to cities or towns which straddle the Beltway, and the absence of a symbol denotes a city or town outside the Beltway. I cluster together the cities and towns outside of Maryland, Virginia, Washington, and West Virginia in the first entry listed.

Table 7.—Residence of Respondents by City or Town
(590 responses)

<u>City or town of residence</u>	<u>N</u>	<u>Percent</u>
Non-area cities/towns	56	9.5%
^Silver Spring, Md.	46	7.8%
*Alexandria, Va.	32	5.4%
Rockville, Md.	29	4.9%
*Arlington, Va.	24	4.1%
*College Park, Md.	20	3.4%
^Bethesda, Md.	18	3.1%
*Washington, D.C.	16	2.7%
Gaithersburg, Md.	14	2.4%
Baltimore, Md.	13	2.2%
^Springfield, Va.	13	2.2%
^Greenbelt, Md.	12	2.0%
Laurel, Md.	12	2.0%
Columbia, Md.	11	1.9%
Bowie, Md.	9	1.5%
Fairfax, Va.	9	1.5%
Germantown, Md.	9	1.5%
*Hyattsville, Md.	9	1.5%
Potomac, Md.	9	1.5%
Beltsville, Md.	8	1.4%
Burke, Va.	8	1.4%
Ellicott City, Md.	8	1.4%
*McLean, Va.	8	1.4%
*Chevy Chase, Md.	7	1.2%
*Falls Church, Va.	7	1.2%
Herndon, Va.	6	1.0%
Vienna, Va.	6	1.0%

^Annandale, Va.	5	0.8%
Annapolis, Md.	5	0.8%
Centreville, Va.	5	0.8%
Reston, Va.	5	0.8%
*Takoma Park, Md.	5	0.8%
Waldorf, Md.	5	0.8%
Wheaton, Md.	5	0.8%
*Adelphi, Md.	4	0.7%
Mt. Airy, Md.	4	0.7%
Montgomery Village, Md.	4	0.7%
Odenton, Md.	4	0.7%
Olney, Md.	4	0.7%
*Sterling, Va.	4	0.7%
Upper Marlboro, Md.	4	0.7%
Crofton, Md.	3	0.5%
Elkridge, Md.	3	0.5%
Leesburg, Va.	3	0.5%
Woodbridge, Va.	3	0.5%
Ashburn, Va.	2	0.3%
*Bladensburg, Md.	2	0.3%
Burtonsville, Md.	2	0.3%
*Capitol Heights, Md.	2	0.3%
Chantilly, Va.	2	0.3%
Churchton, Md.	2	0.3%
*District Heights, Md.	2	0.3%
Edgewater, Md.	2	0.3%
Fort Washington, Md.	2	0.3%
Frederick, Md.	2	0.3%
Fredericksburg, Va.	2	0.3%
Halethorpe, Md.	2	0.3%
Jessup, Md.	2	0.3%
^Kensington, Md.	2	0.3%
Lake Ridge, Va.	2	0.3%
Prince Frederick, Md.	2	0.3%
Richmond, Va.	2	0.3%
Stafford, Va.	2	0.3%
*University Park, Md.	2	0.3%
Accokeek, Md.	1	0.2%
Andrews Air Fce. Base, Md.	1	0.2%
Arnold, Md.	1	0.2%
Bel Air, Md.	1	0.2%
Belcamp, Md.	1	0.2%
Brandywine, Md.	1	0.2%
*Brentwood, Md.	1	0.2%
Catonsville, Md.	1	0.2%
Charles Town, W.V.	1	0.2%

Charlottesville, Va.	1	0.2%
Cheltenham, Md.	1	0.2%
Clarksburg, Md.	1	0.2%
Clifton, Va.	1	0.2%
Cockeysville, Md.	1	0.2%
Colesville, Md.	1	0.2%
Dale City, Va.	1	0.2%
Derwood, Md.	1	0.2%
Dumfries, Va.	1	0.2%
Elk Creek, Va.	1	0.2%
Fair Oaks, Va.	1	0.2%
Fairfax Station, Va.	1	0.2%
Fort Belvoir, Va.	1	0.2%
Glen Burnie, Md.	1	0.2%
Glenelg, Md.	1	0.2%
Green Bay, Va.	1	0.2%
Haymarket, Va.	1	0.2%
Hollywood, Md.	1	0.2%
Joppa, Md.	1	0.2%
La Plata, Md.	1	0.2%
^Landover, Md.	1	0.2%
^Lanham, Md.	1	0.2%
Leonardtown, Md.	1	0.2%
Lexington, Va.	1	0.2%
Lincolnia, Va.	1	0.2%
Lorton, Va.	1	0.2%
Lusby, Md.	1	0.2%
Manassas, Va.	1	0.2%
Middleburg, Va.	1	0.2%
Millersville, Md.	1	0.2%
Mineral, Va.	1	0.2%
North Bethesda, Md.	1	0.2%
North Hills, Md.	1	0.2%
North Potomac, Md.	1	0.2%
Oakton, Va.	1	0.2%
Pikesville, Md.	1	0.2%
Pine Orchard, Md.	1	0.2%
Poolesville, Md.	1	0.2%
Radford, Va.	1	0.2%
*Riverdale Park, Md.	1	0.2%
Round Hill, Va.	1	0.2%
Severn, Md.	1	0.2%
Severna Park, Md.	1	0.2%
South Riding, Va.	1	0.2%
Stevensville, Md.	1	0.2%
Sykesville, Md.	1	0.2%

Tracy's Landing, Md.	1	0.2%
Washington Grove, Md.	1	0.2%
Woodlawn, Md.	1	0.2%

Earlier, I noted that my survey about the Beltway is only the most recent in a series of at least three, dating back to the 1960s. The AAA auto club conducted a survey of its members a few years after the Beltway opened, and the Virginia Department of Transportation another in the early 1990s. My survey expands on the geographical distribution of the Virginia effort, which was limited to 64 residents from Maryland, Virginia, and Washington. It also expands on the 1966 AAA survey, which drew nearly as many responses as mine (between 500 and 600) but was limited to AAA members. At least one-fourth of the respondents to my survey have never been members of AAA or any similar club. The relevant question on my survey asked: "Are you a member of an automobile, truck, motorcycle, or bus organization (for example, AAA)?"

Table 8.—Status of Vehicle Club Membership
(600 responses)

<u>Status of membership</u>	<u>N</u>	<u>Percent</u>
Current member	326	54.3%
Former member	123	20.5%
Never a member	151	25.2%

Respondents to my survey ranged in age from 18 through 78. The highest cluster is from age 21 through 30, likely in part due to my circulating notice of the survey in progress to my graduate classmates and other friends of contemporary age. It is possible that the small number of responses above age 70 results in part from lack of access to or knowledge of the Internet among people in that age bracket.

Table 9.—Age of Respondents in 2000 or 2001
(603 responses)

<u>Age</u>	<u>N</u>	<u>Percent</u>
18-20	30	5.0%
21-25	86	14.3%
26-30	120	19.9%
31-35	57	9.5%
36-40	63	10.4%
41-45	56	9.3%
46-50	64	10.6%
51-55	62	10.3%
56-60	29	4.8%
61-65	20	3.3%
66-70	12	2.0%
71-75	1	0.2%
76-80	3	0.5%

More women than men completed the survey. For racial identification, I provided the same options as the 2000 census. Respondents were permitted to make a single choice among White, Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, and Some Other Race (with a space to write in an additional term). Figures follow also for levels of education, income and professional status; most respondents in the lowest two income brackets were students (indicated by the ".edu" in their email addresses and by explicit references in their replies).

Table 10.—Gender of Respondents
(606 responses)

<u>Gender</u>	<u>N</u>	<u>Percent</u>
Female	343	56.6%

Male	263	43.4%
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Table 11.—Race of Respondents
(599 responses)

<u>Race</u>	<u>N</u>	<u>Percent</u>
White	528	88.1%
Black or African American	36	6.0%
American Indian	0	0.0%
Asian	7	1.2%
Native Hawaiian/Pacific Isl.	1	0.2%
Some Other Race	27	4.5%

Table 12.—Highest Level of Education Achieved
(607 responses)

<u>Level</u>	<u>N</u>	<u>Percent</u>
Did not graduate high school	0	0.0%
High school degree	14	2.3%
Technical school degree	8	1.3%
Some college experience	111	18.3%
College degree	248	40.1%
Master's degree or equivalent	178	29.3%
Doctorate or equivalent	48	7.9%

Table 13.—Annual Household Income, in dollars
(576 responses)

<u>Income</u>	<u>N</u>	<u>Percent</u>
\$1-19,999	22	3.8%
20,000-34,999	39	6.8%
35,000-49,999	90	15.6%
50,000-74,999	130	22.6%
75,000-99,999	110	19.1%
100,000-149,999	128	22.2%
150,000 or more	57	9.9%

Table 14.—Employment Status
(596 responses)

<u>Status</u>	<u>N</u>	<u>Percent</u>
Full-time	471	79.0%
Part-time	80	13.4%
Not employed	45	7.6%

To gauge the transportation habits of the respondent set, I asked a series of questions relating to traveling on the Beltway and to traveling in general. After the question "For non-recreational purposes, I regularly use the following modes of transportation (check all that apply)," I listed ten modes, up to all of which could be selected. I understood the term "train" to include heavy and light rail transit, but several respondents noted in a comment section that they thought I should have specified "subway" or "Metro" in a separate category. I included the esoteric modes of "boat" and "helicopter" to allow, respectively, for commuters outside the Washington area (for instance, New York City) who use ferries, and for wealthier respondents or emergency medical technicians who may use helicopters. The percentages below total higher than 100% because more than one category could be checked.

Table 15.—Modes of Transportation for Non-recreational Purposes
(568 responses)

<u>Mode</u>	<u>N</u>	<u>Percent</u>
Car (other than taxi)	516	90.9%
Walking	197	34.7%
Train	184	32.4%
Plane	87	15.3%
Bus	76	13.4%
Bicycle	52	9.2%
Taxi	45	7.9%
Truck	36	6.3%
Roller blades or skates	10	1.8%

Van pool	10	1.8%
Boat	3	0.5%
Helicopter	2	0.4%

The responses to questions about Beltway driving patterns indicate that over half of the respondents use the highway primarily for non-work purposes; for my survey set, at least, the Beltway is not just a commuter road for its local drivers. In the second table below, the figures indicating that a majority of respondents drive entirely or mostly on the Maryland side is consistent with the geographic breakdown favoring Maryland residents.

Table 16.—Primary Purpose of Beltway Use
(605 responses)

<u>Primary purpose</u>	<u>N</u>	<u>Percent</u>
Work-related traveling	128	21.2%
Non-work related traveling	323	53.4%
Work-related and non-work related travel equally	139	23.0%
None of the above	15	2.5%

Table 17.—Geographic Distribution of Beltway Use
("When driving on the Capital Beltway, you use:")
(604 responses)

<u>Distribution</u>	<u>N</u>	<u>Percent</u>
Md. portion almost exclusively	133	22.0%
Va. portion almost exclusively	47	7.8%
Portions in both states, but mostly in Md.	240	39.7%
Portions in both states, but mostly in Va.	93	15.4%
Md. and Va. portions equally	88	14.6%
None of the above	3	0.5%

Table 18.—Primary Distance of Beltway Travel

(602 responses)

<u>Primary distance</u>	<u>N</u>	<u>Percent</u>
Shorter-distance travel (3 or fewer exits)	37	6.1%
Medium-distance travel (4 to 7 exits)	172	28.6%
Longer-distance travel (8 or more exits)	140	23.3%
Combination of the above	222	36.9%
Rarely or never use the Capital Beltway	28	4.7%
Other	3	0.5%

All but a few of the 607 respondents responded to all or most of the demographic questions. The full survey, including many questions asking for free responses (rather than multiple choice), is reproduced in Appendix A. While the demographic data summarized in this section show variations among the respondents, their free responses indicate what they have in common and what therefore defines the participant set in this survey: To a person (and as I had hoped), all 607 individuals have some familiarity with the Capital Beltway and personal experience riding on it. The remainder of this chapter explores how those experiences have contributed to shaping my respondents' thoughts regarding the Beltway, and how in turn their perceptions help guide their decisions and everyday lives with respect to the highway.

Is the Beltway Safe?

The Beltway opened in 1964. By 1965, some Washington-area residents refused to drive on it because they considered it too dangerous, supporting their claims with personal anecdotes and newspaper accounts of accidents. My survey respondents indicate that in 2001 safety remains a serious concern to people considering using the

Beltway. But despite the engineering hazards discussed earlier, it is not clear that the Beltway has statistically proved more dangerous than other roads to its drivers, either in 1965 or in 2001. Statistics, however, do not determine drivers' behavior; their perception of potential danger does.

When discussing the Old Dominion Paradox, I explained how Virginia's transportation planning process can be considered either inclusive or exclusive of the public, depending on one's perspective. Similarly, the level of danger presented by the Beltway at any given time can be seen as high or low, depending on how the analysis is framed. Consider the following contrasting articles from Northern Virginia newspapers, both published within two years of the Beltway's opening. In December 1964, under the headline "2 Fatalities Per Month On Beltway," the Fairfax City Times claimed that "[I]n the short time it has been in existence, the new Capitol [sic] Beltway has chalked up a fatality rate that is exceedingly high. Six fatalities add up to 2 a month, and numerous accidents have occurred since the opening of the Beltway."⁵⁴⁵ Less than a year later, the Northern Virginia Sun ran a piece titled "Casualties on Capital Beltway Said Remarkably Low in Number," quoting a VDH engineer who noted that the Beltway had a "remarkably low incidence of injury and death."⁵⁴⁶

Both claims were accurate. Readers, however, may well have been confused, because the articles did not explain that the writers were unconsciously using different yardsticks for measuring danger. The Fairfax City Times author likely based his or her

⁵⁴⁵ "2 Fatalities Per Month on the Beltway," Fairfax City Times, 11 December 1964: 2.

⁵⁴⁶ Thomas Love, "Casualties on Capital Beltway Said Remarkably Low in Number," Northern Virginia Sun, 23 November 1965: 1.

judgment on raw numbers: two fatalities a month plus many other accidents on a single road seemed extraordinarily high. But the Northern Virginia Sun journalist judged the Beltway's fatality and accident rates against other roads and found them relatively low.

That writer followed the highway officials' convention of measuring accident rates in terms of VMT, or vehicle miles traveled. In 1965, the Beltway's first full year of operation, Maryland's portion of the Beltway alone realized 738 accidents with 12 deaths. Both figures are large enough in and of themselves to potentially have made 1965 drivers think twice before heading onto the Beltway. But when viewed in context against other highways, the numbers no longer look so high. The 12 deaths in 1965 translate into 1.5 deaths per 100 million VMT, compared to 2.6 deaths per 100 million VMT on freeways nationally and 5.7 deaths per 100 million VMT on U.S. highways nationally in 1965. In Virginia too, the 1.4 deaths per 100 million VMT on the Beltway in 1965 holds up well against figures of 3.2 on other Virginia interstates and 7.1 on the state's primary and secondary highways.⁵⁴⁷

This pattern has held steady in the years since 1965. Even as the Beltway's raw numbers in accidents and fatalities increased, its danger relative to other roads stayed low. By 1988, the Beltway experienced about six accidents a day, a seemingly high number for a 64-mile road but a much lower accident rate (100 accidents per 100 million VMT) than other major area roads. "That explains why," a reporter wrote,

compared to the Beltway, you are seven times as likely to have an accident on Columbia Pike in Virginia; six times as likely on Lee Highway; five times as likely on Little River Turnpike; four times as likely on Rockville Pike or

⁵⁴⁷ Ibid.; Martha Angle, "Road Built as D.C. Bypass Has Become a Main Street," Evening Star, 21 March 1966: A-1; Lee Flor, "Beltway Probe Includes Role of Park, Planning Agencies," Evening Star, 11 June 1967: D-2.

Leesburg Pike; three times as likely on Connecticut Avenue, Georgia Avenue, or Columbia Pike in Maryland and on Route 28 and Route 50 in Virginia; twice as likely on I-95 south of the Beltway; and 1.5 times as likely on Shirley Highway. Your chances for an accident on John Hanson Highway (Route 50) are about the same as on the Beltway, and you are 25 percent less likely to be in an accident on I-270, I-95 north of the Beltway, I-66, and the Dulles Toll Road.⁵⁴⁸

In Maryland, the fatal accident rate statewide decreased from 4.0 fatalities per 100 million VMT in 1968 to 1.1 deaths per 100 million VMT in 1999, even as the actual vehicle miles traveled more than doubled from 18.8 billion to 49.1 billion over the same period. The injury accident rate similarly declined from 174.7 injuries to 77.4 injuries per 100 million VMT—but the actual number of injured people increased from 54,325 in 1968 to 59,979 in 1999 (down from a high of 84,649 in 1986).⁵⁴⁹ Looking at the actual numbers of injuries gives the appearance that more people were hurt driving in Maryland in 1999 than thirty years earlier, which is true. And it is the appearance, not the published statistics, which have the stronger public effect. Motorists driving on the Beltway or on other busy roads think about the accidents and deaths they see on the road or on television; they do not think about SHA and VDOT statistics which suggest that the roads are in fact significantly safer than they have been in the past.

This gap between statistics and perception helps explain the phenomenon of "Beltway phobia," for which Washington-area psychologists, psychiatrists, and therapists began counseling in the 1970s. By 1980, two clinics—the Phobia Program of

⁵⁴⁸ Steven D. Kaye, "Mean Streets," Washingtonian, February 1988: 110.

⁵⁴⁹ Interview with Maj Shakib; Maryland State Highway Administration, Office of Traffic and Safety, Traffic Safety Analysis Division, "Maryland Traffic Accident Facts for State and Local Highways," <http://170.93.43.205/tsad/Feb2701FatPkg_files/sheet001.htm> (26 March 2001).

Washington and the Phobia Treatment Center in Alexandria—ran programs specifically to deal with Beltway phobia. The director of the Washington program in 1980 described the phobia as common, crippling, and encompassing many fears: "the fear of being away from home, fear of bridges, fear of high speed trucks, fear of being trapped."⁵⁵⁰ Beltway phobia was part of a greater framework of driving phobias, another specialist explained, in which "sufferers fall victim to panic attacks (heart palpitations, hyperventilation, feelings of faintness) when confronted with 495's multiple lanes of zooming cars and thundering trucks."⁵⁵¹ An Alexandria psychiatrist treating patients with Beltway phobia described the highway as a "round-shaped Rorschach test," in which drivers all manage to find a way to see their concerns brought to life.⁵⁵² Phobia Center patients went through programs designed to nurse them to comfort on the Beltway; in 1980, for example, a 51-year-old Silver Spring resident drove on the Beltway for the first time in eight years after completing 25 weeks in the phobia program.⁵⁵³

The net result of both Beltway phobia and the perceived sense of intense danger is drivers who decline to use the Beltway out of fear: "I fear for my life on the Beltway,

⁵⁵⁰ Stephanie Mansfield, "Fear & Loathing on the Beltway," Washington Post, 23 March 1980: D1.

⁵⁵¹ Lynne Cheney, "The Beltway: A Ring That Binds, A Line That Divides," Washingtonian, May 1985: 199.

⁵⁵² Katherine Shaver and Leef Smith, "Beltway Fears Drive Some to Distraction," Washington Post, 1 July 2001: A1.

⁵⁵³ Mansfield, "Fear & Loathing."

quite literally," a Sterling resident writes.⁵⁵⁴ This stance was evident as early as 1966, when an Oxon Hill resident rejected the Beltway despite its time savings: "I've tried getting on it and no thanks. It's hell getting on and it's hell getting off. I had an accident at one of the interchanges a few months ago and that did it for me as far as I'm concerned. The beltway's just a speed trap for crazy drivers."⁵⁵⁵ Through 2001, many commuters went out of their way to find alternate routes besides the Beltway not just to escape heavy traffic, but out of concern for their personal safety. A Rockville resident explained in 1995 that "everything about it terrifies me. If I can't get there on a back road, I just won't go at all. It takes me twice as long [to visit my sister in Bowie], but I will not take the Beltway. People ask me why. I tell them it's fear."⁵⁵⁶ A Washington architect similarly described waking up 45 minutes early to prepare himself psychologically for drives on "the biggest hazard out there."⁵⁵⁷

Perceived terror keeps some drivers off the Beltway even when they have not actually tested the road to see how dangerous it feels to them. After moving from Kansas, Alexandria resident Peggy Brown waited ten years to drive on the Beltway "out of great fear;" University Park resident Jo Paoletti recalls that her mother, who moved to the Washington area in her early sixties, "NEVER drove on the Beltway, because she

⁵⁵⁴ Beltway Survey #289.

⁵⁵⁵ Qtd. in Martha Angle, "Road Built as D.C. Bypass Has Become a Main Street," Evening Star, 21 March 1966: A-18.

⁵⁵⁶ Qtd. in Leef Smith, "Beltway Phobia Drives Some to Take the Long Way Home," Washington Post, 12 February 1995: A1.

⁵⁵⁷ Ibid.

was terrified of it."⁵⁵⁸ Even experienced Beltway drivers find themselves scared off: A Centreville resident relates having "a panic attack on the Beltway [in 1990]. I had never experienced such a thing before, anywhere. I had to get off the Beltway and did not go back on the Beltway until 1998."⁵⁵⁹ Often with only hearsay to guide them, out-of-town drivers regularly call Washington AAA offices to ask for routings around the city which would steer clear of the Beltway.⁵⁶⁰ And all of this for a highway which has in fact been statistically safer than many of the alternative routes to which frightened motorists turned. But that is not the point, Gerson Alexander, a driving behavior consultant, explained in 1995: "Whether the Beltway is more dangerous than other roadways is not more relevant when you deal with people's personal beliefs. To them, it's more risky."⁵⁶¹

Still, even if the Beltway is safer than other roads, it is not entirely without danger; the accident and fatality rates have always been well above zero. And as discussed in Chapter 7, certain aspects of the Beltway, notably its early engineering designs, have rendered it more hazardous than it has needed to be.⁵⁶² Highway officials in both states have worked continuously to minimize the Beltway's dangers, but it is

⁵⁵⁸ Beltway Surveys #198 and #17.

⁵⁵⁹ Beltway Survey #402.

⁵⁶⁰ Smith, "Beltway Phobia."

⁵⁶¹ Ibid.

⁵⁶² For a selection of critiques of the Beltway's safety at different times, see "The Beltway (I): Speed and Safety" [editorial], Washington Post, 27 March 1974: A18; Raleigh Burroughs, "Survival Guide for Beltway Rookies," Washington Post, 25 February 1978: A15; "Your Deadliest Drag Strip" [editorial], Washington Post, 16 February 1984: A18; "Beltway Killers: What to Do" [editorial], Washington Post, 15 September 1988: A24; and Steve Bates, "Va. to Curb Some Cargo on Beltway," Washington Post, 16 December 1988: B1.

unlikely that those dangers can be eliminated entirely. In comparison with the perceived dangers drivers tend to superimpose on the Beltway, what actually characterizes the accidents and fatalities on the road? In other words, where might safety-oriented motorists direct their attention while driving on the Beltway?

The Preusser Research Group, working under contract for VDOT, analyzed more than 6,000 accidents on the Beltway between 1990 and 1992 in Maryland and Virginia. The group's findings run counter to some public perceptions of the Beltway's dangers, and offer guidance in understanding the actual causes of the road's accidents and fatalities. The peak time for crashes, Preusser found, coincided with rush-hour congestion. More crashes occurred on Fridays and in November and December than at other times, so drivers were not equally at risk at all times. 83 percent of drivers in Beltway crashes were local residents, so the confusion experienced by long-distance drivers (noted in Chapter 7) in that sense was not a critical hazard. However, 70 percent of tractor-trailer crashes occurred on the I-95 (long-distance) portion of the Beltway, and only 34 percent of tractor-trailer drivers were locally based, so the unfamiliarity of out-of-town truck drivers with the Beltway may have contributed to their accident rate.

Contrary to the perceptions I heard from fire and rescue personnel, alcohol involvement in Beltway crashes was minimal; only seven percent of accidents involved drinking drivers, below the typical interstate crash average (and within that seven percent, truck drivers appeared at half the rate of other vehicle drivers). 44 percent of crashes were rear-end collisions, caused mostly by following too closely or inattentive driving (in 73 percent of these cases, the lead vehicle had stopped or slowed due to traffic congestion). One-third of crashes occurred on wet, icy, or snow-covered

pavement, meaning that drivers had better reason to avoid the Beltway during times of precipitation than otherwise. And 26 percent of fatal crashes involved pedestrian victims (underscoring the danger of walking on the Beltway) and occurred mostly at night.⁵⁶³

Together, these observations suggest that drivers' fears of using the Beltway need not lead to an all-or-nothing proposition. If the accident patterns from 1990 to 1992 remain even somewhat consistent in later years, Preusser's findings amount to a checklist of how motorists can give themselves the best chance of staying safe on the Beltway. A driver who pays close attention to the checklist—who uses the Beltway during the day (or cautiously at night), avoids it when wet, travels mostly on the portion which is not signed as I-95, stays away on Fridays and in the late autumn, and maintains close attention and fair distances from the vehicles in front and behind—is not guaranteed a safe ride, but would compensate for many of the factors which have in the past put Beltway users at the highest risk.

But that is not human nature, or at least not twenty-first-century culturally constructed Beltway driver human nature. Instead of thinking carefully along those lines, Beltway drivers instead seem to respond to congestion and to perceived danger by becoming ever more frustrated and frazzled. The ways in which drivers approach and deal with what they find on the Beltway, which I explore in the next section, causes their blood pressure to soar, even as Preusser's findings suggest that a cool demeanor and clear thinking are key to minimizing the Beltway's actual dangers.

⁵⁶³ Capital Beltway Safety Team, Capital Beltway Safety Team Update, September 29, 1994 (Virginia Department of Transportation, 1994), vi-viii; Ilona Orban, "The Safety Challenge," Public Roads 58.3 (Winter 1995): 32-34.

Coping with the Beltway

"I resent the hell out of its dangerous volume of traffic," a Columbia, Md., resident writes, "because it dominates my visits to my grandchildren."⁵⁶⁴ Like this indignant grandmother, many Washington-area residents express frustration—in my survey, in the media, and on the road—about how centrally traffic conditions and specifically the Capital Beltway factor into their short-term and long-term life decisions. Like many drivers, the grandmother explains that "[w]hat times I leave home and leave for home are both controlled by traffic avoidance." For others, the conditions they would face on the Beltway play a role in their choices of residence and employment. In both cases, drivers in 2001 treat the Beltway more as a nasty intrusion in their lives (a "necessary evil," many respondents write) than as the welcome salvation from terrible congestion it appeared to be in 1964.

Traffic on the Beltway, as on other congested highways, frays nerves. Often drivers simply develop irritation or annoyance, as in the case of the self-described daily commuter from Arlington : "[M]ostly I just hate the Beltway because I face such godawful traffic on it every night. I get irritated at other drivers fairly easily on the Beltway."⁵⁶⁵ For some, the tension escalates until they approach a loss of control, as a Laurel resident with a daily 90-minute commute writes: "I've sat on the beltway for 2

⁵⁶⁴ Beltway Survey #577.

⁵⁶⁵ Beltway Survey #290.

sometimes 3 hours before and thought I was going to go insane."⁵⁶⁶ Actual loss of control manifests itself in aggressive behavior—a Belcamp, Md. resident admits, "Yes, I have road rage"—and a distinct lack of courtesy, judging from the following figures.⁵⁶⁷ Respondents here answered the question, "Which of the following activities have you participated in at least once while driving or traveling as a passenger on the Capital Beltway?"

Table 19.—Expressions of Displeasure on the Capital Beltway
(607 responses)

<u>Expression</u>	<u>N</u>	<u>Percent</u>
Used the horn to honk at another driver	473	77.9%
Made obscene gestures toward another driver	202	33.3%
Swore at another driver loud enough for the driver to hear	94	15.5%

Some drivers turn to a variety of strategies to cope with the Beltway's frustrations and even to turn them into positives. Extended time on the Beltway can in fact be sedative downtime: A College Park commuter admits that

often, the time I have during my morning and evening commutes is the only time I will have alone to myself during the whole day. It is certainly the only time during the day that I will get to listen to music (a luxury!) or just sit in the quiet. I actually really need my commute at the end of the day—it's my only chance to de-stress and unwind.⁵⁶⁸

⁵⁶⁶ Beltway Survey #579.

⁵⁶⁷ Beltway Survey #578.

⁵⁶⁸ Beltway Survey #485.

Lynn Bradley, a Vienna resident, similarly "rarely get[s] frustrated at slow-downs, that's 'free' time for musing and random thoughts."⁵⁶⁹ Beltway drivers use their "free" time, as Bradley puts it, to read; Charlie Maiorana of Washington "usually [has] a book" on hand. "On occasion when traffic comes to a complete stop or is inching along because of an accident or whatever, I pick up the book and read."⁵⁷⁰ Other respondents have played backgammon and poker while caught in traffic, and have initiated dates. The Beltway Singles Club, founded in 1984, provided drivers with individually coded bumper stickers; when a club member following closely behind a stickered car spotted "a cute bumper, he or she [could] call the club to get the first name and phone number of the automotive heart-throb."⁵⁷¹ The figures below suggest that the Beltway is a veritable library, and that drivers and passengers use their time on the Beltway for multitasking in other ways as well.

Table 20.—Personal Activities on the Capital Beltway
(607 responses)

<u>Activity (for drivers or passengers)</u>	<u>N</u>	<u>Percent</u>
Used a cellular phone	370	61.0%
While driving, read from a newspaper, book, or other material	139	22.9%
Applied makeup	71	11.7%
Sent or received email	9	1.5%
Shaved a body part	9	1.5%
Brushed teeth	5	0.8%

⁵⁶⁹ Beltway Survey #349.

⁵⁷⁰ Beltway Survey #63.

⁵⁷¹ Beltway Surveys #332, 338; Lee Michael Katz, "DC's Newest Singles Scene: Cruising Along the Beltway," Washingtonian, June 1984: 13.

In addition to activities which fill the time added by congestion, some drivers purposefully adopt techniques aimed at alleviating their stress. A Gaithersburg commuter "used to swear at every driver for every minor offense . . . However, I have since obtained a squeeze ball and noticed I pay less attention to the aggravations."⁵⁷² A Baltimore resident keeps her drumsticks in the front seat, "and when the traffic slows dead to a crawl, I turn up the tape and drum like hell on my steering wheel to relieve the tension!"⁵⁷³ The drumming "works great," but these methods do not always succeed so well. Kathy Kaplan, an Annapolis resident, writes that

I decided I needed a 12-step commuting program to change my perspective (and therefore stress) on this drive. So I put a meditation book in the car so that when the traffic backed up I could read the thought for the day and then think about it. Five minutes after I read a page on "being patient" I was screaming at one of those aggressive drive[r]s who tail-gates, crosses three lanes at once, etc. So I need to practice applying what I read.⁵⁷⁴

Coping techniques such as the meditation, drumsticks, and squeeze ball allow committed drivers to integrate the Beltway into their daily lives with minimal mental strain. But for others, no palliative is sufficient.

Repeatedly, my respondents write of the extent of their efforts to keep the Beltway at bay in their daily lives. Among the 607 people who replied, four referred to the "great lengths" to which they go to avoid the Beltway, four wrote of avoiding it "like the plague," six explained that they would do virtually anything to avoid it, and

⁵⁷² Beltway Survey #364.

⁵⁷³ Beltway Survey #574.

⁵⁷⁴ Beltway Survey #584.

over a dozen used the same phrase in expressing how important it was for them to stay away (underscore added for emphases):

I practically avoid the beltway at all costs.⁵⁷⁵

I now stay off the Beltway at all costs . . .⁵⁷⁶

I avoid driving on the Beltway at all cost.⁵⁷⁷

Well, I try to avoid the Beltway at all costs.⁵⁷⁸

I intentionally avoid it at all costs, commuting for a few years taught me to STAY AWAY.⁵⁷⁹

I avoid the Beltway at all costs, no matter how much time I would save by using it.⁵⁸⁰

[W]henever I have to go somewhere, I try to avoid the beltway at all costs.⁵⁸¹

I try to avoid the beltway at all costs because of the congestion and the aggressive driving.⁵⁸²

Try at all costs to avoid during rush hour.⁵⁸³

I hate the beltway and try to avoid it at all costs.⁵⁸⁴

⁵⁷⁵ Beltway Survey #504.

⁵⁷⁶ Beltway Survey #492.

⁵⁷⁷ Beltway Survey #486.

⁵⁷⁸ Beltway Survey #482.

⁵⁷⁹ Beltway Survey #427.

⁵⁸⁰ Beltway Survey #418.

⁵⁸¹ Beltway Survey #366.

⁵⁸² Beltway Survey #250.

⁵⁸³ Beltway Survey #236.

⁵⁸⁴ Beltway Survey #222.

We avoid the beltway at all costs, because it is just not efficient.⁵⁸⁵

I avoid the Beltway now at all costs.⁵⁸⁶

Alone among the respondents, Amy Sheppard of Falls Church, who considers the Beltway to be a "very useful tool" at nonpeak hours, "question[s] people who avoid it at all costs anytime of the day due to their fear of traffic or the speed of drivers."⁵⁸⁷

But far more common among the responses is the decision to write off the Beltway as a viable transportation tool and to restructure personal lives as a result. On this phenomenon, Jennifer O'Keefe of Alexandria writes that

I know many people—even those from this region who will not go anywhere which would require them to travel on the beltway—which I believe causes a sector-ization if you will. The intimidation factor of driving on it serves as an isolation factor for many.⁵⁸⁸

Drivers find themselves rejecting potential activities because they would bring the Beltway into play. "As a local who has to use the beltway to shop, visit friends, etc.," a Greenbelt suburbanite writes, "it cramps my style and discourages me from doing things I need to do at certain times of day or night."⁵⁸⁹ Kirk Huddleston, a Baltimore resident, rejects driving south out of hand: "Anytime I think of something I'd like to do in DC, I immediately remember I'll have to travel the beltway, and usually decide not to do

⁵⁸⁵ Beltway Survey #195.

⁵⁸⁶ Beltway Survey #47.

⁵⁸⁷ Beltway Survey #238.

⁵⁸⁸ Beltway Survey #216.

⁵⁸⁹ Beltway Survey #187.

whatever it was that I wanted to."⁵⁹⁰ Daily schedules are tweaked to conform to the Beltway's constraints: Janna Bialek, a Chevy Chase resident, has "planned virtually all my activities, and my children's activities, to avoid the Beltway."⁵⁹¹ Even staying away from the road during the day does not always keep it at bay; 36 respondents (5.9 percent) write of dreaming about riding on the Beltway.

On the scale of intensity of responses to the Beltway's frustrations, the next step up from adopting coping mechanisms and choosing daily avoidance is purposefully selecting residential or employment options out of the road's reach. Some area residents take only jobs which preclude Beltway driving, including the Greenbelt resident who "promised myself never to have to commute on the Beltway, i.e., take a job where I would have to drive there every day."⁵⁹² "I won't even look at certain jobs," an Alexandria resident writes, "if it means extensive Beltway travel."⁵⁹³ Others have looked, but then turned away:

Round Hill, Va.: "I have turned down several jobs for more pay over the years to avoid the beltway."⁵⁹⁴

Prince Frederick, Md.: "I have not taken jobs because a great part of my commute would take me on the beltway. The aggravation and unpredictability of the traffic flow is not worth it."⁵⁹⁵

⁵⁹⁰ Beltway Survey #583.

⁵⁹¹ Beltway Survey #595.

⁵⁹² Beltway Survey #51.

⁵⁹³ Beltway Survey #117.

⁵⁹⁴ Beltway Survey #441.

⁵⁹⁵ Beltway Survey #410.

Rockville, Md.: "In 1997 I was downsized; I had a mortgage to pay and no job. My severance would not last forever. I was offered a job in Vienna, VA . . . shortly after the lay-off; I turned it down because I did not want to spend such a large portion of my day commuting."⁵⁹⁶

Decisions where to live similarly hinge on the Beltway for some. "I purchased my house," a McLean resident writes, "specifically so that we don't have to go near the beltway, except on rare occasions."⁵⁹⁷ An Alexandria resident writes that "I picked my home in a location that would not require its use."⁵⁹⁸ "When purchasing a home 5 years ago," a Waldorf resident echoes, "part of my decision was based on finding a location that would minimize beltway usage."⁵⁹⁹ These and other respondents with similar stories cope with the Beltway by choosing homes and jobs which keep the highway within reach but beyond the scope of regular necessity. Other choices which might otherwise be preferable are not worth the price of "destroying [one's] soul," as another Alexandria resident puts it.⁶⁰⁰

The most drastic response to the Beltway, however, is to take one step further and sever ties with the Washington area entirely. A 2001 AAA poll of 451 drivers from Baltimore to Richmond (not all of whom were AAA members, unlike the 1966 survey discussed earlier), focusing on traffic conditions and lifestyle changes, found that approximately 15 percent of respondents considered leaving the area because of the

⁵⁹⁶ Beltway Survey #362.

⁵⁹⁷ Beltway Survey #385.

⁵⁹⁸ Beltway Survey #347.

⁵⁹⁹ Beltway Survey #112.

⁶⁰⁰ Beltway Survey #284.

traffic.⁶⁰¹ Among my own respondents, a Baltimore resident "moved to Florida for a while partly because of the overcrowding manifested in Beltway traffic."⁶⁰² John Osborne explains in detail how "the Beltway changed my life":

I used to work on computers primarily in banks, which means I had to always go from bank to bank. Often, I would get these chest pains. At first, only when I was on the beltway. Later, almost any time or any road, if they were saturated. I mentioned this to my supervisor and he told me to go see a doctor. Well, I didn't and it just seemed to go on and on. On the job, I would take as long as I could at each bank in order to cut down on the driving that was required of me (other people took up the slack). Socially, I was an asshole.

Finally I said "FUGGET!!! I'm going to give up this bullcrunch and go into my first love....plants." So, I quit my 'real' job and got into the plant business. That was in 1990. Things progressed, I got happy, got married and now own a small nursery, growing succulents and venus fly traps. I live and work on thirty acres of land out in the woods in Tracys Landing, Md. I work with an ear to ear grin every day. Why, because I fled the beltway. I watch the traffic reports on the morning news and feel...what's the word here....freedom???. Why, because I don't have get onto that beltway until I want to.

.....

So, I would say the beltway has played a big part in my life and still does. It made me change my life and I love it for that. I say I hate it, but, since hate is a form of fear I assume it the dread of having to get on it is the reason that I hate it. As for my chest pains, not one since 1990. In fact, I don't even remember what they felt like.⁶⁰³

For Osborne, "fleeing the beltway" meant moving to a more rural area of Maryland, closer to the Chesapeake Bay than to Washington. For others, more distance is

⁶⁰¹ Sandra Fleishman, "Traffic May Cause Some to Leave Area," Washington Post, 23 June 2001: H9; AAA Mid-Atlantic, "Bad Traffic Leads Many Residents to Consider Leaving the Washington Area," <http://www.aaamidatlantic.com/livenew/aboutus/pga/pga_dc/021901leaving_area.asp> (25 June 2001).

⁶⁰² Beltway Survey #553.

⁶⁰³ Beltway Survey #453.

necessary: Joshua Wolf "relocated to [Pennsylvania] for graduate school and the beltway alone will prevent me from returning to the Washington Area."⁶⁰⁴

Across the spectrum of responses, from banging drumsticks on the steering wheel to moving to Florida, drivers within each category determine the extent to which they structure different parts of their lives around the Capital Beltway. In some ways their decisions are based on their own individual mental constructions of the Beltway, for instance in the case of residents who avoid it because of the dangers they perceive even if the Beltway is statistically safer than alternative roads. In other ways, they respond to less arguable factors of Beltway life, including its daily congestion and angry drivers (witness the 33% of respondents who report making obscene gestures toward other drivers). But in both of these respects, the Beltway enters their lives in ways more profound than do most roads. Not simply a piece of pavement, the Capital Beltway, Chevy Chase resident Mark Crouter emphasizes, "has a major influence on important life decisions."⁶⁰⁵

⁶⁰⁴ Beltway Survey #471.

⁶⁰⁵ Beltway Survey #303.

CHAPTER 9

"SURRENDER DOROTHY": THE BELTWAY'S ROLES AND EFFECTS

Beltway, the also Capital Beltway highway, part I-495 and part I-95, that circles Washington, D.C., at an average radius of c. 10 miles/16 km from the White House, in Maryland and Virginia. It has come to be regarded as symbolic of national government, which is said to view the nation and the world from a limited, "inside the Beltway" viewpoint.⁶⁰⁶

PENNSYLVANIA AVENUE [INTERCHANGE]

This road leads to the White House. Pray for our Federal Government and any upcoming elections. Pray that as a country we might return to righteous standards (Prov. 14:34).⁶⁰⁷

While the Beltway contributes to structuring the lives and decisions of individuals around the Washington area, it also influences residents and other Americans collectively. In this chapter, I discuss several ways in which the Beltway plays a significant role in varied regional and national dynamics. Beyond its function as a facility for local and interstate traffic, the Beltway serves as a template on which people can promote their beliefs and values (as in the two examples in the headers above), as a venue of both community and conflict, as a site for negotiation between public and private space, and as an arena for mediation and compromise in inter-jurisdictional cooperation. In addition, I explain briefly how although research suggests, perhaps surprisingly, that beltways in general do not spur residential and commercial growth, the Capital Beltway has hastened economic development in some areas it passes through, particularly in its early years.

⁶⁰⁶ Archie Hobson, ed., The Cambridge Gazetteer of the United States and Canada: A Dictionary of Places (New York: Cambridge University Press, 1995), 55.

⁶⁰⁷ Brentwood Foursquare Church, "Prayer Around the Beltway," brochure, n.d.

This chapter draws most directly on the fifth operation of the cultural landscape study model in analyzing the Beltway's significance in multiple contexts and in examining its representations in national and local discourse. It also addresses the second operation's distinction between social and political boundaries, and introduces a variety of ways in which the Beltway has over time come to serve as a cognitive boundary for people living both inside and outside it. The chapter's first section briefly discusses a local church's use of the Beltway for religious purposes, touching on the spiritual properties of cultural landscapes in the fieldwork model's first operation. In all, the chapter explores some of the many social, political, economic, and cultural effects of the Beltway on regional and national levels.

In the loop: The Beltway as a pawn

"Why is it," Bethesda businessman Earle Palmer Brown writes, "that 66 [sic] miles of concrete and a brace of river bridges have developed into a scapegoat for every scribe with an axe to grind about Washington?"⁶⁰⁸ As Brown and the first chapter header suggest, the Capital Beltway has entered the American vernacular as a synecdochic figure for the national center of federal power; media critics frequently use the term "Beltway" rather than "Washington" or "Congress," for example, to express their frustrations about the federal bureaucracy. But as a template, the Beltway is more

⁶⁰⁸ Earle Palmer Brown, "It Seems Everyone is Blaming the Beltway," Montgomery Gazette, 21 April 1995.

malleable than that. Reporters and politicians appropriate the highway as a vehicle for conveying their agendas, but they are not alone.

Demonstrators on foot as well as motorbike and car used the Beltway for political purposes as early as 1966. In June of that year, a small group of fair housing activists, under the banner of the group ACCESS (Action Coordinating Committee to End Segregation in the Suburbs) spent several days in a protest march circumnavigating the Beltway. The Fairfax County Board of Supervisors, mindful of the shooting of civil rights activist James Meredith in Mississippi a week earlier that was the immediate prompt for the Beltway march, directed police to let the demonstrators walk on the left shoulder without interference despite laws prohibiting pedestrian travel. The march was overtly political: ACCESS chairman Charles Jones explained that the march took place "so that area civil rights sympathizers wouldn't 'run off, psychologically and physically, to Mississippi, because we do have problems in the North, too.'"⁶⁰⁹

Demonstrations on the Beltway have tended otherwise to rely mostly on motor vehicles. An Arlington resident recalls using her motorcycle on the Beltway to push for agendas including farmers' needs, children's toys, and veterans' recognition:

I've ridden in blockades (farmers to DC in the 80's), often done the Toys for Tots motorcycle rides, ridden in Rolling Thunder—and I can tell you, it's wild to ride your "bike" with hundreds of other people—the car traffic goes nuts, the adults are usually pretty irritated, but damn, the kids love it (includes the adults [who] can still dredge up the wonder of childhood).⁶¹⁰

One week after the death of auto racer Dale Earnhardt in February 2001, more than 100 vehicles took a 90-minute memorial lap around the Beltway, organized privately by

⁶⁰⁹ "Housing Group Enters 2nd Day of Beltway Hike," Evening Star, 9 June 1966: B-4.

⁶¹⁰ Beltway Survey #596.

Elkridge resident Ronald Leizear but publicized through newspapers, radio, and television, and condoned by Maryland state troopers who ordered participants to stay below the speed limit.⁶¹¹ Later that year, the Beltway and other highways nationwide served as showcases for displays of patriotism, as American flags and similar symbols were draped from overpasses in the wake of the September 11 terrorist attacks.

While the Beltway has at least several times been appropriated toward political and memorial ends, Maryland's Brentwood Foursquare Church has commandeered it as a religious tool. In a brochure titled "Prayer Around the Beltway," printed and privately distributed by the church around 2000, 38 listings of interchanges or nearby sites each list an object of prayer related in some way to the particular location; drivers can then use the brochure as a spiritual guide while driving the Beltway to pray for appropriate things at appropriate points. Some of the prayer suggestions cover themes not inherently religious: the brochure encourages drivers at the "Interstate 295/Washington" interchange to "pray against the stronghold of violence in the greater Washington, D.C. area," and at Lee Highway to "pray for the healing of our nations over racial issues," in addition to the prayer for government reprinted in the chapter's header. Many of the suggestions, however, emphasize deep-seated religious beliefs and proselytism. In "Bethesda/Rockville," drivers are prompted to "pray for Jewish evangelism so the Jewish people will recognize Jesus Christ as their Messiah," and at "Georgia Avenue/Wheaton," near what is commonly referred to as the Mormon Temple

⁶¹¹ David Nakamura, "A 'Track' for Race Fans' Tears," Washington Post, 26 February 2001: B1.

(discussed below), the brochure urges motorists to "pray against the spirits of religious deception that operate in Mormonism and in all other cults."⁶¹²

Other groups too use the Beltway to advance their beliefs and goals in other respects; later in this chapter, I offer a further example of how Smart Growth advocates have purposefully used the Beltway as a pawn in their larger struggle. However, the most ubiquitous context for the Beltway taking on connotations independent of its creators' original intentions is its framing as a barrier separating those "inside the Beltway" from those "outside the Beltway." The first of those terms, language maven and political pundit William Safire explains, "is not a place but a state of mind; used as a compound adjective, the prepositional phrase means 'having the conventional wisdom held by self-described political insiders.'"⁶¹³ The term, planning historian Carl Abbott adds, uses isolation behind the Beltway's barrier "as a metaphor for insulation from popular values. It implies separation and deracination in a cynically negative valuation of Washington's nonregional role."⁶¹⁴ Abbott dates the introduction of the term "inside the Beltway" to 1983, which is when it took on its political connotation; in fact, the term first appeared in print in a Washington Post story in the 1977 headline "Inside-the-Beltway Trout Fishing Nears." In its political sense, the phrase owes its origin to

⁶¹² Brentwood Foursquare Church.

⁶¹³ William Safire, "Inside the Circumferential Highway," New York Times Magazine, 15 March 1992: 22.

⁶¹⁴ Carl Abbott, Political Terrain: Washington, D.C. From Tidewater Town to Global Metropolis (Chapel Hill: University of North Carolina Press, 1999), 128. See Abbott, 128-129, for a discussion of what specific criticisms of government and economy have been subsumed under the less illuminating banner of "inside the Beltway."

Washington Post reporter Mike Causey, who with a photographer was one of "the first [two] civilians to circumnavigate the Capital Beltway."⁶¹⁵

My Web survey included a question asking respondents for their understanding, if any, of the terms "inside the Beltway" and "outside the Beltway." Most are familiar with the political association, though others offered alternative perceptions which I introduce in the next section. The terms indicate that the Beltway has "become a mythical boundary of reality, the Washington insiders versus the rest of the country," a Silver Spring resident writes.⁶¹⁶ "Inside," an Ellicott City resident suggests, means "out of touch with the 'real' people, wealth, politically oriented."⁶¹⁷ "Mere residence in the city," a 1983 published analysis of Washington argues, ". . . is commonly thought to impart special, privileged knowledge."⁶¹⁸ People living outside the city—and the Beltway effectively expands the boundary of the city in this context—are both literally and figuratively out of the loop.

For sound bites, this "inside/outside" distinction is useful as a quick signifier of ideas; as an accurate metaphor of real-life dynamics, it is riddled with problems. For one, clearly the distinction is an exaggeration, because not every Beltway insider

⁶¹⁵ Abbott, 128, 214-215; Safire, 22, 24; Sussman, "The Best and Worst of the Beltway," 28; Feaver, "Washington's Main Drag," A12; Bob Levey, "Hats Off to a Top Colleague: Mike Causey," Washington Post, 8 May 2000: C9; Mike Causey, "Today's the Day Diary Columnist Turns the Page," Washington Post, 8 May 2000: B1. See also Hugh Sidey, "Life in the Capital Cocoon," Time, 4 March 1985: 20.

⁶¹⁶ Beltway Survey #295.

⁶¹⁷ Beltway Survey #560.

⁶¹⁸ Alan K. Henrikson, "'A Small, Cozy Town, Global in Scope': Washington, DC," Ekistics 299 (March/April 1983): 132.

geographically is a Beltway insider politically. On this count, Paul Foer expresses his frustration:

I like to joke about it: I am your quintessential just inside the Beltway person. I'm really at the edge of it, where I grew up, where I was raised. And so you wonder, well, if I happened to have moved half a mile away across the Beltway, would I be outside the Beltway, say, almost inside the Beltway? As it is now, I say I grew up almost outside the Beltway. Cause my brother and his family and other people I know and so forth are involved in the Washington scene and politics and what have you. It hits home how that term has come to mean something very, very negative, very pejorative. It's interesting that on my street, among my immediate neighbors and friends with whom I grew up, almost nobody had any direct involvement or career involvement in the federal government! Almost nobody!⁶¹⁹

Beyond inaccurate, local residents find the term pejorative, as Foer notes. "When politicians or more often their lackies," a Rockville resident writes, "speak of 'outside the beltway' it gets the hair on the back of my neck to stand up—I find it a bit insulting that their world is so insular that 'outside the beltway' is all other places in the world lumped together in a derogatory otherness."⁶²⁰ Other respondents believe that the "inside/outside" distinction, in its political sense, is "sorta dumb," "inane," "stupid," "snide," "ridiculous," "condescending and sarcastic," "shortsighted and negative stereotypical," "derogatory," and "idiotic."⁶²¹

Furthermore, some respondents resent the political and derogatory use of "inside the Beltway" because they consider the politicians using it to be hypocrites. On the one hand, many of them live inside the Beltway themselves, as Olin Johnson of Baltimore notes: "The term . . . is a lot [of] crap. It's used by politicians when they try to associate

⁶¹⁹ Interview with Paul Foer.

⁶²⁰ Beltway Survey #334.

⁶²¹ Beltway Surveys #21, 66, 78, 189, 332, 352, 408, 447, 561.

themselves with 'regular' people. They make it seem as if being inside the beltway is on another planet. A planet, by the way, that they are a part of."⁶²² Lynne Cheney, who would later reach the pinnacle of alleged "insiderness," wrote in 1985 that "'inside the Beltway' is, after all, a phrase used mainly by Washington insiders to denigrate the way other Washington insiders think."⁶²³ On the other hand, many of the "Beltway insiders" privy to political inside information live geographically outside the Beltway, as Silver Spring resident Mike Colson writes: "'Inside the Beltway' to me is just another stupid thing political commentators say, since many people who live inside the beltway have no influence on the politics of the USA and a great many people who live outside of the beltway have a great deal of influence on politics in this country."⁶²⁴ In the terms introduced in the cultural landscape study model, the Beltway from this perspective constitutes a political boundary, because the definition of the group inside the borderline is developed and applied without the consent of members of that group.

Most survey respondents express frustration at the insinuation that people "inside the Beltway" are not tuned into the rhythms and values of the rest of the country. But several turn the dynamic around and suggest, in the words of a Bethesda resident, that "those 'outside the Beltway' [are] out of touch with the priorities of our nation" [emphasis added].⁶²⁵ Christopher Moore of Odenton, Md., argues that he and other

⁶²² Beltway Survey #451.

⁶²³ Cheney, "The Beltway: A Ring That Binds," 199. Reporter Larry Van Dyne makes the same point in Van Dyne, "Getting There," 203.

⁶²⁴ Beltway Survey #20.

⁶²⁵ Beltway Survey #429.

locals have appropriated and subverted the previously derogatory term: "Outsiders tend to think of 'inside the Beltway' as a bad thing, symbolizing politics and gridlock. I think of it almost as a symbol of pride and sophistication."⁶²⁶ Outside the Beltway "is a far less enlightened constituency," a Derwood, Md., resident writes; "Thank GOD we live within the beltway," an Alexandria resident says, without elaboration.⁶²⁷ An Arlington resident offers a more nuanced explanation:

To me, perhaps because I DO live inside the Beltway, I think of being inside the Beltway as a positive thing—because Washington to me is a dynamic, exciting, politically aware and intelligent city. I know many people think of Inside the Beltway as a negative term, but to me, I think of it as exciting. Outside the Beltway . . . to me, is connotative of rednecks . . . people who make political decisions based on stupid reasons . . . dumb people.⁶²⁸

For these writers and for those who conversely use "inside the Beltway" negatively, the Beltway is equally effective as a line of demarcation between those in the know and those outside it. This happens frequently: Earle Palmer Brown notes over 3000 hits when typing "Beltway insider" into an Internet search engine, and cites examples from the New York Times, Chicago Tribune, Economist, Wall Street Journal, Baltimore Sun, and Newsweek in demonstrating how [i]t has become standard operating procedure for the press to personify the Beltway as some amorphous monster and blame it for everything they think is wrong about Washington."⁶²⁹ In this way, politicians and reporters project their agendas through the Beltway, as the motorcyclists,

⁶²⁶ Beltway Survey #203.

⁶²⁷ Beltway Surveys #267, 117.

⁶²⁸ Beltway Survey #290.

⁶²⁹ Brown, "It Seems"; Brown, "Few Words in Defense of Capital Beltway," Rockville Gazette, 23 May 2001: A-17.

demonstrators, and church mentioned earlier do using other methods. As a physical device (a venue for demonstrating) and a rhetorical one, the Beltway thus serves on national and regional levels as a template for groups' objectives far beyond traffic mitigation.

For residents of the Washington area, however, the political dimensions of the inside/outside the Beltway scheme are only one of at least ten ways in which the Beltway serves as a borderline. For instance, some perceive the Beltway as a racial boundary. "Blacks mostly inhabit the inner beltway communities," an African American resident of College Park writes, "[while] whites inhabit the outer beltway communities."⁶³⁰ Demographic data supported this perception as early as 1971, when the Washington Center for Metropolitan Studies published research indicating that "the Capital Beltway was the major boundary line for integration and that 87.5 percent of blacks who lived in Fairfax and Montgomery counties [both mostly outside the Beltway] were living in areas that were more than 80 percent white."⁶³¹

But the Beltway's racial connotations have gone farther than that. Circumscribing the majority-black District, the highway quickly gained a derogatory nickname, described in a 1967 newspaper account:

Though the 25-member House District Committee in recent years has had as many as 11 members from Southern or border states (the number is currently seven) it is only rarely that racial slurs surface. Thus some Hill observers recall with surprise that Rep. John Dowdy (D., Tex.), during hearings last year on the Federal City College, referred to the Capital Beltway as the "Congo Bypass."⁶³²

⁶³⁰ Beltway Survey #606.

⁶³¹ Nan Netherton et al, Fairfax County, Virginia, 666.

⁶³² Rice Odell, "Our City Government: The Tangled Web," Washington Daily News,

This appellation has survived through the intervening decades: a white Chantilly resident writes of the Beltway that "as a friend of mine once called it 'it's the ring around the Congo.'"⁶³³ The term surfaced elsewhere in the course of my interviews, but with the request that its mention be kept off the record.

A third way in which the Beltway serves as a cognitive boundary as well as a physical one is in terms of class. Unlike race, though, my survey respondents disagree on exactly who lives on each side of the border. Most who raised this point concur that "[i]nside the Beltway brings to mind a lower economic status versus 'outside the Beltway,'" and that "outside" suggests a "more affluent community."⁶³⁴ But some believe the reverse and argue that "outside" equals "less affluent."⁶³⁵ The contrasting views indicate that from this perspective, at least, the Beltway's role as a boundary is grounded more in perception than fact.

This again is the case with the supposition that the Beltway is a key determining factor in housing costs, suggested by 22 survey respondents (out of 607). Most of these run along the lines of the Howard County resident who writes that the Beltway "is definitely a 'boundary' as far as the amount of rent or the cost of a home is concerned (higher costs associated and charged to be inside the beltway)."⁶³⁶ Real estate agents,

7 November 1967: 5.

⁶³³ Beltway Survey #388.

⁶³⁴ Beltway Surveys #512 and 506.

⁶³⁵ See, for example, Beltway Survey #494.

⁶³⁶ Beltway Survey #473.

however, explain that the Beltway by itself does not divide generally lower-priced from generally higher-priced property. A Burtonsville agent writes:

The Beltway can have a positive or negative effect on value. On an appraisal report the appraiser may make negative value adjustments for the noise from the Beltway. They might also make a negative sight adjustment if the property has a direct view of the road or if a sound barrier is in the backyard of the subject property. On the other hand, some people find it very appealing to live close to the Beltway and have quick access to work. This might lead someone to pay a higher amount for the house. This makes it hard to appraise sometimes because the house itself may be in average condition and it is just the great location that makes the customer willing to pay a higher price.⁶³⁷

From this description, it appears that the Beltway is not a decisive factor in determining the general cost of housing in communities, but can play a role in the cost of individual properties very close to it.

Minka Goldstein, a longtime Bethesda real estate agent working for Long and Foster, notes that in her experience the Beltway has not been a key factor affecting the cost of properties inside it versus outside it. However, the road does create a "fatal flaw" for a small handful of properties immediately adjacent to it, "fatal" because the properties' locations, unlike their prices and conditions, cannot be changed and will always be subject to the nuisances created by the Beltway.⁶³⁸ As a result, the properties closest to the Beltway can be divided into what I will call proximity zones.

In the inner proximity zone, closest to the Beltway and including the Elrich/Loflin house backing onto the highway as described in Chapter 5, daily life is significantly and adversely affected by the Beltway and property values are often lowered to compensate. The existence and negative connotations of the inner proximity

⁶³⁷ Beltway Survey #495.

⁶³⁸ Interviews with Minka Goldstein, 5 March and 17 May 2001.

zone are apparent in the wording of agents' summary listings of properties which prospective house buyers might fear lie in the undesirable zone. The following excerpts are from May 2001 listings on the Metropolitan Regional Information Systems service, used by real estate agents across the Washington area:

2307 Coleridge Drive, Silver Spring:
*** Does not back to Beltway!!!***

7612 Arrowood Road, Bethesda
Beltway is not an issue with this home.

7807 Hamilton Spring Road, Bethesda
. . . fabulous deck with hot tub looking out on a beautiful private (not near the beltway) fenced lot with plenty of space for expansion.

7559 Pepperell Drive, Bethesda
Backs to 495, but not directly.

The outer proximity zone consists of properties close to the Beltway but far enough to avoid the negative effects detailed by Lisa Loflin. In this zone, proximity becomes a positive selling point rather than a negative one. These listings illustrate:

5023 Ontario Road, College Park
Close to 495/in College Park, MD

9708 Belvedere Place, Silver Spring
Terrific loc min from 495

8212 Lilly Stone Drive, Bethesda
Conveniently located just mins to 495⁶³⁹

⁶³⁹ Listings are copyright Metropolitan Regional Information Systems, Inc., and used with permission of Minka Goldstein, Long and Foster Realtors. I have cited listings MLS #MC2567024, MC3310122, MC3410280, MC2368641, MC2209585, MC2750369, and MC2327773, all accessed on 17 May 2001.

With its effects on the inner and outer proximity zones, the Beltway does play a role in determining certain property values, but in a more nuanced way than the simple inside/outside configuration suggested by survey respondents.

Other respondents are equally confident that the Beltway is "certainly a boundary when it comes to car insurance rates!"⁶⁴⁰ Several argue that as a rule those rates run higher inside the Beltway. Here again the actual picture is somewhat more complex. A veteran insurance agent for Allstate, working in suburban Maryland, explains that until the 1980s most insurance companies did charge higher rates for communities inside the Beltway, because rates were determined by the frequency of accidents in given areas. Accidents were more common in more congested areas, which tended to be inside the Beltway.

However, the industry later shifted its basic pricing model to charge higher rates in areas where the people causing the most accidents reside, regardless of where the accidents occur. In this way, using a hypothetical example, residents of Brentwood (inside the Beltway) would not suffer higher rates simply because residents of Bowie (outside the Beltway) frequently caused accidents there. The agent explains:

So what happened over a period of years, what's evolved over a period of years, is that the rates inside the Beltway and outside the Beltway are in many cases the same right now. Because the people inside the Beltway that are having the accidents actually live outside the Beltway. Now we're going out there and reaching out for those rates. We are no longer penalizing the people who live inside the Beltway with higher rates. We're actually rating where the person that had the accident lives. And we're not doing a geographical area; we're doing a ZIP code. Meaning that you could have a ZIP code inside the Beltway, and a ZIP code outside the Beltway, with the same rate, if the numbers of accidents are equal.⁶⁴¹

⁶⁴⁰ Beltway Survey #352.

⁶⁴¹ Interview with *Doxey Tobocman, 28 February 2001.

Area residents who perceive the Beltway as a determining line for insurance rates may thus be unfamiliar with the industry shift in rate determination, or may simply conclude from a comparison of rates at single sites inside and outside the Beltway that the road must be the key dividing line.

In addition to politics, race, class, and cost determinations, a sixth way in which the Beltway serves as a perceptive boundary is as a suburban demarcation line. "In downtown Silver Spring, Arlington, Falls Church, Alexandria, Bethesda, etc," a Silver Spring resident writes, "there is more of an urban, cosmopolitan feel. Just a few miles away, once you cross the beltway, there almost instantly becomes more of a suburban feel."⁶⁴² Other respondents repeat the suburban theme, but in most cases do not elaborate on what creates or defines the suburban "feel." This view suggests that for some, the inner-Beltway suburbs, including the ones cited by the respondent above, function more as an extension of the city of Washington than do the outer-Beltway suburbs. Another Silver Spring resident does characterize what for her differentiates the inner suburbs like hers from the outer ones: "I didn't want to live outside the Beltway as that seemed hopelessly suburban and Yuppie. The land of snort utes, screaming kids, overindulgent parents, and self-satisfied customers demanding special treatment from the Manager."⁶⁴³

This explanation of the contrast between suburbs leads to the seventh category of cognitive boundary, a cultural one. In this view, people living inside and outside the

⁶⁴² Beltway Survey #483.

⁶⁴³ Beltway Survey #490.

Beltway think, act, and interact very differently from each other. An Alexandria resident living inside the border explains that "[m]ost people I've talked to who live 'outside the beltway' look at 'inside the beltway' as something scary. People outside don't like to travel in. It's a separate culture."⁶⁴⁴ A District resident finds distinctly different cultural worlds on either side of the Beltway border:

[The Beltway is] a cultural boundary. When I was single I wouldn't date anyone from outside the Beltway because it was like they had a totally different existence (I did give them a chance). They refused to come into the city -- in fact hadn't been in in years - and constantly refused to do cultural events such as the Kennedy Center, the opera, museums and the like. They always wanted me to go out there, and to partake in things like bowling, the park, going to the mall (read - the mall, not the Mall), and so forth. They also had no clue about problems of race and poverty, or the urban experience, but were opinionated about it anyhow, and they also were overwhelmingly conservative. I have found the inside-the-Beltway crowd to be a much better fit for my personality.⁶⁴⁵

This cultural contrast seems to be an issue of urban versus suburban preferences, but the Beltway serves as a convenient line for this respondent to draw a boundary between the two.

Similarly, the Beltway is a social borderline; some inside make different decisions regarding their social lives than some outside. Respondents living in Arlington (inside) and formerly in Bowie (outside) explain:

I've found it to be a boundary for social events -- my friends and I who live inside the beltway are much more likely to go to DC to go out at night; the friends who live outside the beltway consider stuff inside to be a special occasion experience. Those of us inside consider going to Reston to be a chore, whereas Bethesda -- although the same time to get there -- isn't. (Arlington)⁶⁴⁶

⁶⁴⁴ Beltway Survey #340.

⁶⁴⁵ Beltway Survey #337.

⁶⁴⁶ Beltway Survey #232.

I know that my friends who live in the District definitely feel the Beltway is a boundary. When I lived in Bowie, no one wanted to visit because it seemed so far, and was "Outside the Beltway," but it was only 20-30 minutes away. They would rather go across town, which could sometimes take longer than going to Bowie. As soon as I moved "inside," there was more of a willingness on their part to visit. (formerly Bowie)⁶⁴⁷

As in the previous case, the Beltway serves as a physical marker of distinctions between urban and suburban lifestyles.

Finally, the Beltway is also a psychological boundary for those who, for various reasons, feel an emotional need to live on one side or the other. "There are those," Arlington resident Carol Holihan writes, "who are as horrified at living inside the beltway (implying an area that's too urbanized) as there are those who are horrified at living outside the beltway."⁶⁴⁸ Yet again the urban/suburban distinction seems to be key here, this time as the parameters of an emotional tug-of-war, with the Beltway in the middle. A second Arlington resident explains that "I lived outside the Beltway in Gaithersburg for a while, and I hated it because I felt totally out of the loop. The physical distance was a part of it, but mostly it was just an emotional distance I felt. I love being 'inside.'"⁶⁴⁹ This sense of "being inside," she suggests, is more than simple geographic location: for her, "being inside" means situating herself emotionally inside whatever she considers "the loop" (likely Washington's social urban sphere and/or political scene) as well as inside the Beltway's physical loop.

⁶⁴⁷ Beltway Survey #212.

⁶⁴⁸ Beltway Survey #194.

⁶⁴⁹ Beltway Survey #290.

In the nine ways described above, the Beltway acts as a mental, or cognitive, boundary between one phenomenon outside and a contrasting one inside. In most of them, the root of the contrast appears to be distinctions between urban and suburban preferences and mindsets. Here, as before in the cases of the demonstrators and the Brentwood church, the Beltway has become a convenient pawn for individuals to use in expressing their positions on issues for which the highway itself is in most cases not directly responsible. At the same time, certain key lifestyle decisions, such as the ones made by the respondents who view the Beltway as a social or cultural boundary, are based solely on individuals' cognitive perceptions of the road, as was also the case in scenarios described in the previous chapter. The Beltway, then, works simultaneously as a template on which people can promote their beliefs and as a justification for decisions they make informed by those beliefs.

Battleground and community

The Beltway serves concurrently as a venue of conflict and consensus. While Virginia and Maryland use the Beltway as a focus for debating their respective political philosophies, other feuds run alongside: Local and long-distance drivers each expect the Beltway to cater to their needs, motorists and truckers have trouble accommodating one another, and car drivers themselves cannot stand each other. Yet the same highway which breeds, or at least intensifies, these clashes, also creates and enhances regional identity and a sense of community even as it fuels the sparring factions.

Among its many conflicts, the Beltway mediates between regional and national interests in terms of which drivers the road most directly serves every day. Here the conflict lies between the Beltway as I-495, a commuter road for Washingtonians, and the Beltway as I-95, the north-south transcontinental highway. This, writes Brian LeBlanc of North Carolina, is "[t]he main thing that distinguishes the Beltway from anything else . . . the strange hybrid of interstate and inter-regional traffic that it must carry . . . Most freeways serve one purpose or the other (bypass or through route), but the Beltway serves both."⁶⁵⁰ I-495 is home to one community of local drivers; I-95 is home to another composed of truckers and other long-distance drivers and linked through CB radio and the I-95 Corridor Coalition, which provides traffic information for all segments of the highway up and down the East Coast.⁶⁵¹ A similar dynamic exists on the partial circumferential around Boston, where Massachusetts Route 128 and Interstate 95 share the same highway. The Capital Beltway is, according to Maryland governor Parris Glendening, "our Main Street and our interstate, and the two simply aren't compatible."⁶⁵²

This duality was not supposed to happen. Robert Mannell, who worked for VDH as an engineer on the original development of the Beltway in Virginia, explains that

the thing that surprised a lot of people was the usage of it by the local citizens. We [the original Virginia engineers] kind of felt that most of the travel would be

⁶⁵⁰ Beltway Survey #70.

⁶⁵¹ See Randy Kennedy, "I-95, A River of Commerce Overflowing With Traffic," New York Times, 29 December 2000: A1; and I-95 Corridor Coalition, <<http://www.I95Coalition.org>> (11 November 2001).

⁶⁵² Qtd. in Stephen C. Fehr, "Beltway at 25: The Road Most Traveled," Washington Post, 17 August 1989: A1.

interstate, not intrastate. As it turns out, as densities increased not only along the Beltway but inside the Beltway itself, the need to improve the existing streets with all the stores and everything, you get long lines of traffic and stoplights. So people then would find, hey, I can go and jump on the Beltway and bypass this, jump back off. And consequently, the Beltway was loaded with local traffic.⁶⁵³

The turnaround was apparent within two years of the Beltway's opening. By 1966, 60 percent of the highway's users were locals, and the Evening Star reported that "[w]hat federal highway officials envisioned as a Washington bypass for interstate travelers has become in practice primarily a convenience for local drivers."⁶⁵⁴ By the mid-1990s, around 90 percent of Beltway traffic was local; still, with roughly one million daily users by 2001, the raw number of non-local long-distance drivers, relatively unfamiliar with the road, was substantial.⁶⁵⁵

With the addition of I-95 through traffic, the Beltway's vehicle count increased well beyond original projections, and meant more wear and tear for the road's surface and the Wilson Bridge.⁶⁵⁶ Non-local drivers unfamiliar with the Beltway also introduce yet another safety hazard to the mix. Virginia Master Trooper Bill McKinney, who finds "a big difference" between local and non-local drivers, explains that motorists

⁶⁵³ Interview with Robert Mannell.

⁶⁵⁴ Angle, "Road Built as D.C. Bypass," A-1.

⁶⁵⁵ "Some Beltway and Congestion Statistics." Typescript document, [1994?], provided by Maj Shakib, Maryland State Highway Administration.

⁶⁵⁶ The 1997 construction in Landover of a stadium for the Washington Redskins added yet another ingredient to the traffic stew: Before and after home games, the Beltway henceforth had to accommodate thousands of additional vehicles in addition to regular local and long-distance traffic. See Stephen C. Fehr, "Traffic Problems Loom Over Landover Stadium Plan," Washington Post, 24 December 1995: B1; and Alice Reid and Philip P. Pan, "Traffic Fears Become Reality in Beltway Jam," Washington Post, 15 September 1997: A1.

from out of town tend to drive more erratically while getting their bearings, often finding themselves in the far left lane and having to quickly merge four lanes to the right to exit.⁶⁵⁷ "Usually the long-distance travelers," Maryland officer Lorenzo Miller adds,

they drive a lot faster than the local commuters. Cause the majority of the locals, they know where the bad spots are on 495 or 95. The out-of-towners don't. They're the ones, the majority of the times, in a crash or something like that, where there was a dangerous curve coming. And when you're driving at a high speed you might not make that curve.⁶⁵⁸

When a tractor-trailer crashed into two cars and a tour bus on the Beltway in Virginia in March 2001, state police spokeswoman Lucy Caldwell attributed the accident to the truck's New Jersey driver's unfamiliarity with the highway, where "traffic had slowed—as it always does at that point."⁶⁵⁹ Confusion at the notorious Mixing Bowl—the complicated intersection in Fairfax County of the Beltway with Interstates 95 and 395—has contributed to high accident rates there; VDOT began extensive reconstruction of the interchange in 1999 with completion projected by 2010.⁶⁶⁰

⁶⁵⁷ Interview with Bill McKinney.

⁶⁵⁸ Interview with Lorenzo Miller.

⁶⁵⁹ Qtd. in Michael D. Shear and Martin Weil, "Truck, Two Cars, Tour Bus Crash on Beltway in Virginia; 17 Injured," Washington Post, 19 March 2001: B1.

⁶⁶⁰ See, for example, Michael D. Shear and William Branigin, "Crash at Mixing Bowl Kills Five," Washington Post, 19 March 2000: A1, which notes that "[t]he Springfield interchange is considered one of the most dangerous in the country." For background on the Mixing Bowl, see Stephen C. Fehr, "Virginia's 21-Lane Solution," Washington Post, 20 February 1994: A1; Marylou Tousignant, "Slow Relief Ahead for 'Mixing Bowl,'" Washington Post, 26 June 1997: Fairfax Weekly, 1; Eric L. Wee, "Greetings From . . . the Mixing Bowl?" Washington Post, 30 April 1999: B1; and Alan Sipress and Alice Reid, "Drivers Face a Long Road as Va. Fixes Mixing Bowl," Washington Post, 3 January 1999: A1.

Safety problems are compounded by the absence along the Beltway of some of the services long-distance drivers expect. Unlike other portions of I-95 and other long-distance Interstates, the eastern arc of the Beltway includes neither commercial trucker stops nor state-run rest areas. Long-haul truckers get tired, nonetheless. As a result, SHA engineer Maj Shakib explains,

we have certain areas of the Beltway that the truckers actually just pull off on the shoulder and they sleep. And it's a tremendous problem in terms of safety. One point is around U.S. 50 and the Beltway, as you're coming off the Beltway either northbound or southbound, Inner Loop and Outer Loop of the Beltway to go east on US 50. Immediately between [the Route] 704 interchange and the Beltway, if you go there from time to time, maybe late at night, early mornings, you see some trucks that are actually lined up on the shoulder. It's really causing a headache to us and to the state police, because one of the most severe types of accidents is actually people running off the road and plowing into the back of a truck or another vehicle parked on the shoulder. Because the shoulder is there for the safety of the motoring public. And the truckers, they park there. We've provided parking restriction signing, but to no avail. They just continue to do that.⁶⁶¹

For accounts of the Mixing Bowl reconstruction project through 2001, see Alan Sipress, "VDOT to Pay for 4 New Parking Lots," Washington Post, 12 January 1999: B1; Alice Reid, "Springfield Interchange Work to Begin Tonight," Washington Post, 5 April 1999: B1; Alice Reid and Alan Sipress, "Rigs Collide as Work on Interchange Gets Started," Washington Post, 7 April 1999: B1; Alan Sipress, "'Mixing Bowl' Finish Date Pushed Back," Washington Post, 26 October 1999: A1; Michael D. Shear, "Mixing Bowl Construction Going Smoothly," Washington Post, 17 November 2000: B10; and William Branigin, "Mixing Bowl is Speedy and Costly," Washington Post, 25 April 2001: B3.

Finally, for an example of the personal impact of the reconstruction project, see Kimberly Rose Johnson, "My Home is Over a Barrel," Washington Post, 7 January 2001: B8. Much more information appears on the website <<http://SpringfieldInterchange.com>> and in the intermittent newsletter VDOT Springfield Interchange Improvement Project, published beginning in the late 1990s by the Virginia Department of Transportation.

⁶⁶¹ Interview with Maj Shakib.

This issue arises mostly at night. The lack of other services for long-distance travelers—notably rest rooms—causes problems at all hours, as I discuss later in this chapter.

The Beltway's designation as I-95 has not had uniformly negative consequences. With Maryland and Virginia both electing not to erect official rest or service areas, gas stations and motels near the eastern arc have become the beneficiaries.⁶⁶² Jim Giese, formerly Greenbelt's city manager, points to the decision to run I-95 on the Beltway as the prime cause of the city's second economic boom (the first was when the Beltway first went through in 1964) and the "reason why we have the motels we have in the city here."⁶⁶³ Despite this economic boon, the increased traffic and danger created by the unanticipated addition of I-95 to the Beltway suggests that, as a Fairfax resident puts it, the road "can either be a bypass, or a through route. It does not have the capacity to be both."⁶⁶⁴

Exacerbating the tensions between local and long-distance motorists is the mix of private and commercial traffic. A greater percentage of the long-haul drivers are truckers; although they would use the Beltway in any case as a Washington bypass, they are much more likely to use it in its identity as I-95. In fact, truck drivers and commuters often each see the Beltway as their best option for moving around the area; when they try to do it on the same crowded highway, truckers become frustrated at the nonstop commuter flow, locals flare at the giant monsters flanking them on the

⁶⁶² For a discussion of the analogous situation along rural Interstates, see Peter T. Kilborn, "In Rural Areas, Interstates Build Their Own Economy," *New York Times*, 14 July 2001: A1.

⁶⁶³ Interview with Jim Giese, 17 January 2001.

⁶⁶⁴ Beltway Survey #535.

congested road, and transportation officials find themselves constantly challenged to reach a fair balance.

For their part, Beltway car drivers have long been concerned by the danger they perceive from trucks. A rash of serious accidents involving tractor-trailers in the mid-1980s intensified these negative feelings; a 1986 AAA report studying 18 months' worth of recent crashes concluded that such trucks were involved in 19 percent of all Beltway accidents while comprising only 3.2 percent of Beltway traffic.⁶⁶⁵ However, Maryland State Highway Administration statistics from 1994 showed trucks to be involved in 11 percent of Beltway accidents while comprising eight to 11 percent of Maryland Beltway traffic, suggesting that by that year trucks were no more likely than cars to take part in accidents, although truck crashes were twice as likely as non-truck crashes to result in a fatality.⁶⁶⁶ Yet the perception of excessive danger lingers. "There is not a day that goes by," a resident wrote to The Washington Post in 1985, "when I am traveling on the Beltway to and from my job on Capitol Hill that I don't shudder when an 18-wheeler passes too closely or rides my bumper."⁶⁶⁷ Another letter complained of the daily sight of "a truck driver tailgating or cutting someone off or driving at an

⁶⁶⁵ Sue Ann Pressley, "The Beltway: Region's Main Street, Main Pain," Washington Post, 14 March 1986: A12; Nell Henderson, "Many Beltway Accidents Stem From Volatile Mix of Trucks and Autos," Washington Post, 26 August 1988: A12.

⁶⁶⁶ Maryland State Highway Administration, "Capital Beltway (I-495)," August 1994, 2, 3. Typescript document provided by Maj Shakib, State Highway Administration. 1992 truck counts conducted by the Metropolitan Washington Council of Governments confirm that trucks comprise approximately six to ten percent of Beltway traffic, varying according to specific location. See C. Patrick Zilliacus, 1992 Count of Heavy Truck Traffic on the Capital Beltway and Other Major Highways in the Washington Region (Washington: Metropolitan Washington Council of Governments, 1993), 17.

⁶⁶⁷ Wrexie Bardaglio, letter to the editor, Washington Post, 13 October 1985: B8.

excessively high speed. They seem so belligerent—almost as if they're compelled to intimidate the other drivers on the road."⁶⁶⁸

Auto drivers responding to my survey in 2000 and 2001 for the most part echo these concerns. Connie Lee, a Silver Spring resident, for example, writes that "there are too many trucks going too fast, or truck drivers going without sleep, maybe something could be done where trucks could be driven at night only or restricted off the Beltway during RUSH HOUR. Something has to be done."⁶⁶⁹ Others, however, defend the truckers, by pointing out that the Beltway does keep much of the through commercial traffic off of other local roads, and that in fact the road was intended primarily for that type of travel in the first place.⁶⁷⁰ An Arlington resident "not crazy about being tailgated by 18-wheelers" points out that "in defense of truckers, the Beltway was built so they could go around the city instead of through it. Use by commuters is secondary to this purpose and it might help collective tempers if this point was made more often."⁶⁷¹ Tractor-trailers even prove welcome to an Arnold, Md. motorist, who uses them as guideposts during heavy downpours when lane markings are obscured.⁶⁷²

⁶⁶⁸ Dianna Sakacs, letter to the editor, Washington Post, 13 October 1985: B8. See also Joy Sharp, letter to the editor, Washington Post, 12 April 1980: A18; and Connie Morella, "A Loophole So Big You Can Drive a 35-Ton Rig Through It," Washington Post, 26 July 1986: D8.

⁶⁶⁹ Beltway Survey #492.

⁶⁷⁰ Beltway Survey #343.

⁶⁷¹ Beltway Survey #86.

⁶⁷² Beltway Survey #210.

On the other side, some truck drivers throw their frustrations right back at the people driving cars next to them. In focus groups conducted by the Preusser Research Group for VDOT in 1994 (introduced in Chapter 2), all 13 Beltway truck drivers interviewed cited the behaviors of automobile drivers—particularly lack of common courtesy and respect for trucks—as their top safety concern and the primary cause of truck/car crashes. Most motorists, truck drivers agreed, "have no idea of trucks' capabilities; if they did, motorists would simply not do the things they do."⁶⁷³ Still, regardless of whose behavior has been more to blame, Maryland's and Virginia's responses to improving safety, including left-lane truck bans (1984) and weigh stations (1988 in Virginia and late 1990s in Maryland) have been directed mostly at truckers, not motorists.⁶⁷⁴

⁶⁷³ Preusser Research Group, "Drivers' Perception," 229. See also 216-217, 240-243.

⁶⁷⁴ This may be due in part to members of Congress who, when stuck themselves on the Beltway in backups resulting from truck/car crashes, are more likely to have been in a car and to blame the truck. On this point, see "Washbiz," Washington Post, 19 September 1988: Washington Business, 3; and Stephen C. Fehr, "Maryland Stretch of Beltway Most Dangerous, Truckers Say," Washington Post, 16 January 1991: B1.

On the states' efforts to improve safety on the Beltway by implementing restrictions on trucks, see R.H. Melton, "Beltway Truck Wrecks Rise," Washington Post, 14 February 1984: A1; Sandra Saperstein, "Md. Plans Truck Restrictions for Beltway," Washington Post, 21 February 1984: B1; Rose Marie Donovan, "Hotline Snares Truckers," Fairfax Journal, 24 May 1984: A1; Paul Hodge, "Virginia Agrees to Restrict Beltway Truck Lanes," Washington Post, 25 October 1984: A1; "Trucks Restricted on Beltway," Washington Post, 27 November 1984: B3; "Trucks Obeying Ban on Beltway Lane," Washington Post, 3 June 1985: B7; John F. Harris, "No Quick Solution to Beltway Truck Safety Problems is in Sight," Washington Post, 25 September 1985: C1; D'Vera Cohn, "Beltway Decree Extended," Washington Post, 22 February 1986: B1; John Lancaster, "Confronting Beltway Truck Safety Head-On," Washington Post, 26 November 1987: A1; Steve Bates, "Beltway Crackdown Set on Speeding Truckers," Washington Post, 15 September 1988: D1; and Pierre Thomas, "1st Beltway Truck-Checking Station to Open," Washington Post, 30 September 1988: C1. For an example of an effort by the trucking industry to educate its own, see American Trucking

But truckers direct greater frustration toward the overall situation in which they have little choice other than the Beltway.⁶⁷⁵ Kensington Volunteer Fire Department member Patrick Stanton, who deals with the resulting accidents, sympathizes with the truckers:

[T]hose poor guys; anyone who would drive any large vehicle on 495 has my immediate sympathy. Because they have to deal with these people who are trying to drive at a thousand miles an hour because they're constantly late. But people don't realize, when they zip in front of a tractor-trailer and hit their brakes, that he can't just touch his brakes and slow down like they do. And the amount of commerce, just commercial traffic that travels 495, is just staggering.

And you see—I always feel bad for the over-the-road drivers who have to come through any section of 495. Because there is no way to detour around it. There's no road, no cut-through, that they can use. They have to get stuck on there, the commercial traffic with the regular traffic. And I remember years ago when they had the tank truck that turned over and split, and it burned up a big section of 495. That type of thing, it always worries me that what happens one day when the guy carrying the tractor-trailer load of pool cleaner, when he gets cut off and can't correct going through those S-curves. Because people don't--if you make a mistake up there, there's nobody up there who's gonna forgive you for it.⁶⁷⁶

"There is no way to detour around it," Stanton notes. Cliff King, a Missouri trucker familiar with the Beltway, recalls his frustration with that scenario when he "missed the damned exit I was to get on and had to drive all the way back around. This is due to the fact that semi's [sic] aren't allowed to go any other way."⁶⁷⁷

Associations, "How to Drive on the Capital Beltway," brochure (Alexandria, Va.: American Trucking Associations, 1991).

⁶⁷⁵ See Clifford J. Harvison, "Don't Blame the Truckers," Washington Post, 18 September 1988: C8.

⁶⁷⁶ Interview with members of the Kensington Volunteer Fire Department.

⁶⁷⁷ Beltway Survey #603.

For truckers, the Beltway is a "no-win choice," truck driver Cathy Clark argues: Driving fast to keep up with traffic entails speeding, which is dangerous and which angers car drivers, but obeying the speed limit means going slower than most of the traffic, which nets the same results.⁶⁷⁸ Truckers and motorists alike see no end to their conflict; their choices are then to adapt or to throw in the towel. Some truck drivers choose the latter; Jo Clair, a Wheaton-based trucker "gave up driving trucks locally in part because the traffic was too dangerous and frustrating to deal with daily, much less hourly."⁶⁷⁹ But even the complete removal of all truck traffic from the Beltway would not clear the road of conflicts for the remaining motorists, because those car drivers find at least as much consternation with each other as they do with truckers.

Beltway drivers detest other Beltway drivers. "With the exception of the [Pennsylvania] Turnpike," an Arlington resident writes, "I can't think of a single highway that attracts more inept, unskilled drivers who drive in a state of rage, day dreaming, distraction or just plain stupidity."⁶⁸⁰ And not just inept: Survey respondents consider their fellow drivers to be "bozos," "idiots," "morons," "inconsiderate, self-important pricks," "maniacs," "rude, discourteous, dangerous, and self-centered," and

⁶⁷⁸ Beltway Survey #399. For more on Washington-area truckers' perspectives, see Stephen C. Fehr, "Hazardous Duty on the Beltway," Washington Post, 21 May 1989: D1; and Wells Tower, "The Long Haul," Washington Post Magazine, 5 August 2001: 8-15, 21-23.

⁶⁷⁹ Beltway Survey #377.

⁶⁸⁰ Beltway Survey #596.

"hell bent for leather."⁶⁸¹ Kensington firefighter Stanton documents the abysmal driving skills he observes on the Beltway:

It's almost like a contest up there, to see who can be the most aggressive. . . . I used to joke with people all the time: what they taught us, I remember at driver's school, was if someone cuts in front of you and you can't maintain your distance, you know, one car length for every ten miles an hour, you would just slow down a little bit. Well, I used to tell people, if you try to do that on the Beltway, you might as well get on in reverse. Because that's the only way you're going to get anywhere. . . . Actually, the worst thing though, and some of the worst accidents I've seen, is people go to the end of the merge lanes, and they stop. And the guy behind them, who's looking over his shoulder, trying to pick his hole that he's going to drive into, drives right into the back of that person.⁶⁸²

What sets drivers off? High speeds, aggressive behavior, and inattention rank high on the list.⁶⁸³ Maryland state trooper Lorenzo Miller expresses frustration at "all these incidents where people are getting killed for no reason. Cars crashing. I've been in so many fatals that when you find out why they crashed, you're like, this is stupid."⁶⁸⁴ Miller and other police and firefighters are especially irritated by rubberneckers, described by a reporter in 1975 as a special species, the "Gawkus Accidenti. This strange bird jams on his brakes the minute he spots any activity—like an accident or flat tire. He creeps by the source of excitement, even if it's on the opposite side of the

⁶⁸¹ Beltway Surveys #42, 63, 123, 239, 357, 446, 570.

⁶⁸² Interview with members of Kensington Volunteer Fire Department.

⁶⁸³ See Alice Reid, "Drivers Call Aggression Top Danger on Beltway," Washington Post, 27 April 1998: A1. Other regions of the country also claim from time to time to have the rudest and most aggressive drivers; see, for example, John-Thor Dahlburg, "Fla. Drivers Merge Into the Rude Lane," Los Angeles Times, 3 June 2001: A20.

⁶⁸⁴ Interview with Lorenzo Miller.

Beltway, then wonders why traffic is slowed down."⁶⁸⁵ Kensington firefighter Murray

Head Jr. recalls a firsthand example of the consequences of rubbernecking:

We ran a call for [a vehicle] that flipped over. And it was an S.U.V., and they had come around a turn probably doing 80 miles an hour. And they came around, mother and daughter, flipped the car a couple times, wearing their seatbelts, and they were flying. Well, we pulled up on the scene and we blocked—to check up on them—and this guy, I mean, I turn around to just give the first-aid bag. He looks right at me. And slams right into the Jersey wall. It was right where it turns, and he just went right into it watching what was going on. And I was like, you—it was so dumb! You just pay attention to the road. He just slammed over the wall.⁶⁸⁶

Even drivers who follow the letter of the law sometimes earn the ire of those around them. After Arlington doctor John O. Nestor wrote to the Washington Post in 1984 that he drove 55 miles per hour in the Beltway's left lane in a personal attempt to slow down speeders, area drivers skewered him in print for months for interfering with traffic, and "Nestoring" entered the Washington vernacular as a term for driving excessively slowly in the passing lane.⁶⁸⁷

Drivers have difficulty responding to each other effectively because, as many responding to my survey acknowledge, they become different people, unfamiliar even to themselves, when on the road. "For the most part," Bethesda resident Megan Michael writes, "it seems that when people drive it, they lose their inhibitions and almost everyone becomes a crazy, rude driver, not caring or considerate of their fellow drivers.

⁶⁸⁵ John H. Corcoran Jr., "Commuter's Survival Guide," Washingtonian, October 1975: 113.

⁶⁸⁶ Interview with members of the Kensington Volunteer Fire Department.

⁶⁸⁷ See Lisa Rein, "Va. Bill Would Limit Driving in Left Lane," Washington Post, 11 February 2001: C1.

At times, I too am guilty of a little road rage or indiscreet actions."⁶⁸⁸ "I really believe . . . it has made us into kind of nasty people," an Alexandria resident adds. A Waldorf resident agrees that "many people become changed by this road into disrespectful, dangerous, and rude drivers." Several survey respondents apologize in their replies for what they consider to be shameful behavior, explaining that "[i]t is difficult at times to keep cool and calm while driving on the Beltway."⁶⁸⁹ Despite these frustrations, interpersonal tensions between motorists, like the local/long-distance and car/truck conflicts, have no obvious solutions for appeasement of all parties involved.

Given these multiple and coincident conflicts, it seems almost paradoxical that the Beltway concurrently serves as a major unifying device for the Washington region and that it in fact engenders a sense of community among the same drivers who hate both the road and each other. Historian Zachary Schrag writes that the Metro system has done the same:

Both a commuter rail service for the suburbs and a subway for the city, Metro was truly a metropolitan system. And looking at [graphic designer Lance] Wyman's map, riders could see that they were no longer just suburbanites or city dwellers, but citizens of a region. . . . The promise of metropolitan harmony is displayed everyday, as hundreds of thousands of Washingtonians, Marylanders, and Virginians gladly share one enormous machine.⁶⁹⁰

They do not share the Beltway quite so gladly; still, as a Gaithersburg resident writes, the road "has integrated and unified 3 distinct areas, Northern Virginia, Maryland, and

⁶⁸⁸ Beltway Survey #507.

⁶⁸⁹ Beltway Survey #207.

⁶⁹⁰ Schrag, "Mapping Metro," 23.

DC, into one great metropolitan area."⁶⁹¹ The Beltway, other respondents write, creates a "regional unity," a "cohesive whole," "one large metropolitan community," "almost one state, affectionately known as the Area."⁶⁹² The same closely-spaced interchanges which exacerbate traffic, a College Park resident argues, increase "the feeling of community. On something like the New Jersey Turnpike . . . you definitely know that you are not traveling within the same community. Often it is 20 minutes between exits."⁶⁹³

Increased geographic proximity created by the Beltway contributes to this regional cohesion. But in a social sense, the community is forged by the common experiences and language the Beltway provides. "I've found," a Greenbelt resident explains, ". . . there are certain terms and references that locals are privy to. It's like you are instantly judged by the vocabulary you choose to use in talking about the beltway. There's a certain amount of pride that goes along with learning with lingo, conquering the beltway, etc."⁶⁹⁴ Despite its annoyances, Odenton resident Christopher Moore adds, the Beltway

is part of the fabric that makes us Washingtonians and Marylanders. It is a rite of passage for teenagers after they get their licenses to be able to navigate the Beltway. It is a common link between two strangers. For example, I can have a conversation about the beltway with someone from the area and another person not from the area wouldn't be able to follow it. Plus, we can laugh at that same person who got lost in the area and wound up driving

⁶⁹¹ Beltway Survey #514.

⁶⁹² Beltway Surveys #220, 490, 485, 203.

⁶⁹³ Beltway Survey #485.

⁶⁹⁴ Beltway Survey #607.

in circles for hours!⁶⁹⁵

As in other social settings, regular participants become acclimatized to the omnipresence of certain characters; the regular appearances (on radio, television, and the Beltway itself) of traffic reporters and emergency response personnel remind drivers that normal routines prevail and that their world is functioning.⁶⁹⁶

The Beltway's sense of community is enhanced by its appearance in a variety of popular culture productions, for which only people in the know understand the full meaning. While the New Jersey Turnpike may have inspired a large collection of songs, fiction, poetry, painting, sculptures, and films, the Beltway has generated its own small set as well.⁶⁹⁷ Thus these inside jokes from a 2001 Washington Post readers' contest:

What's the difference between the Mixing Bowl and a D.C. manhole cover?
The manhole cover has been known to be the site of rapid acceleration.
(Ben F. Noviello, Fairfax)

⁶⁹⁵ Beltway Survey #203.

⁶⁹⁶ On the sense of community among and engendered by Washington's traffic reporters, see Nellie Oberholtzer, "Radio Trio of Traffic Flyboys," Washington Post, 2 March 1983: D.C. Weekly, 1; and Stephen C. Fehr, "Angels of the Rush Hour," Washington Post, 26 July 1993: A1. For background on a variety of response teams which have appeared on the Beltway since 1964, see the following: for the AAA Beltway Patrol, see Brian Kelly, "Special Patrol Aids 5,000," Evening Star, 29 May 1967: B-2; for the Maryland citizens' Beltway Patrol, see Ivan G. Goldman, "Help on Way for Stranded Beltway Motorists," Washington Post, 14 August 1972: C1; for the Virginia Highway Courtesy Patrol, see "Beltway Patrol Extended," Northern Virginia Sun, 28 March 1973: 7; for Maryland's Coordinated Highways Action Response Team (CHART) program, see Melinda Deslatte, "Computer System Helps Cure the Beltway Blues," Diamondback, 1 February 1999: 11, and Alan Sipress, "Incredible Journeys," Washington Post, 4 February 2000: A23; and for Virginia's Safety Service Patrol, see Alice Reid, "Roadside Help Program Gets Lift From Gilmore," Washington Post, 29 May 1998: D1.

⁶⁹⁷ For an extensive discussion of the New Jersey Turnpike in popular culture, see Gillespie and Rockland, Looking for America, 155-171.

What's the difference between the Beltway and Lorton?
More traffic flows through Lorton.
(Tom Witte, Gaithersburg)⁶⁹⁸

Several pieces of Washington familiarity are necessary to correctly interpret the jokes:
The first refers to recurring manhole explosions around Georgetown in the late 1990s
and early 2000s due to underground electrical problems; the second plays on the
overcrowded penitentiary in Lorton, Va., through 2001, and possibly on alleged drug
traffic there as well.

Several Beltway poems have appeared in print. These haiku, which all play off
of themes discussed earlier in this study, were published in 1990:

City and car, like
Man and woman wedded with
A ring forever. (Ira Gitlin, New Carrollton)

Moving at sixty
Traffic passes me quickly
Like I'm standing still. (Eugene W. Berkhoff, Alexandria)

If there is a way
That will avoid the Beltway
You better take it! (Chris Schmitz, Fairfax)

Bewildered driver
Left, now right, now left again
Ah, out-of-state tags. (Diane Mularz, Silver Spring)

Accident ahead
Long line of rubberneckers
Beltway blues again. (Troy Whitfield Jr., Centreville)

Around and around
If only I had more time
. . . and an Excedrin! (Elizabeth Freeland, Lanham)⁶⁹⁹

⁶⁹⁸ "Style Invitational, Report from Week LIV," Washington Post, 4 March 2001: F2.

⁶⁹⁹ "Bob Levey's Washington," Washington Post, 17 May 1990: C14; "Bob Levey's Washington," Washington Post, 30 May 1990: D13.

A poem published in the literary journal Potomac Review contrasts the natural and artifactual aspects of the Beltway:

Stuck on the Beltway, 5 p.m.
by Jean Johnson

grumbling along with the mutter
of the automobiles
that kidnap us,
I look up and see
hundreds of nightjars
darting
 swooping
in and over the highway
snatching
 at full speed
invisible bugs.

Is it the metal's heat
or the mephitic breath
 of gasoline
that has brought this aerial circus
to perform
just overhead of
the stalled cars?

No one looks up
to see the nightjars
 hunting.⁷⁰⁰

Music invoking the Beltway ranges from wordless melodies, such as Bethesda resident and pianist Liz Donaldson's reel "Beyond the Beltway" (Fig. 10), to complex songs. In her recorded song titled "Beltway," singer-songwriter Eileen Joyner invokes the Beltway's traffic, its consistent place in her life, and in the sixth line of the last stanza, the sense of community she feels a part of by driving on it:

⁷⁰⁰ Jean Johnson, "Stuck on the Beltway, 5 p.m.," Potomac Review 30 (Spring 2001): 20. Reprinted by permission.

Beltway
By Eileen Joyner

It's 95 degrees outside
I'm startin' now to sweat
Humidity is rising
My clothes they're getting wet
So I'm looking for the Beltway
That's where I want to be
With my air conditioner blowing
I'm as happy as can be

Well I'm stuck out here in Northeast
Washington DC
I got a date in Rockville and
He's waiting there for me
So help me find the Beltway
I've got to get there fast
I've been driving down Wisconsin
I don't know if I can last

When I was just a little gal
My momma said to me
"The quickest way
Between two points in Washington DC
It ain't no straight line
It's got circularity
Go out and find the Beltway and
Let the Beltway set you free"

Well I drive it in the springtime
I drive it in the fall
Don't look for me at five o'clock
Don't even try to call
'Cuz I'm out there on the Beltway
With all my friends
I'm on the highway out to nowhere
The Beltway never ends⁷⁰¹

⁷⁰¹ Eileen Joyner, "Beltway." From the album "Always Wear Underwear," copyright Underwear Music, 1991. Reprinted by permission. For more information, contact Eileen Joyner (703-569-8584, eileenjoyner@hotmail.com).

In Joyner's lyrics, the Beltway itself is the device which sets the narrator's mind at ease: "That's where I want to be . . . I'm as happy as can be." Singer Richard Schuman's song titled "Beyond the Beltway," in contrast, focuses on the Beltway's role as a dividing line. For Schuman's narrator, peace of mind, freedom, and dreams all lie outside the "hectic city" contained within the Beltway. The phrase in parentheses is a refrain sung by the audience.

Beyond the Beltway
By Richard Schuman

When first I saw D.C., city life was it for me,
Like so many others, seduced by its allure,
But as my hair grows thin, a little voice within,
Says "Fly away to where the air is pure."

I got to be ("Beyond the Beltway")
Where I'm free ("Beyond the Beltway")
Where a man can expand to be all that he can be
With ne'er a care ("Beyond the Beltway")
In air so rare ("Beyond the Beltway")
That only when I'm there can I dare to be me.

Each morn I feel like cryin', when I board the old Red line,
And Dupont Circle looms above the ground,
At the end of another day, as I head the other way,
I know that's where my dreams can all be found.

I got to be ("Beyond the Beltway")
Where I'm free ("Beyond the Beltway")
And leave the hectic city far behind
When I go home ("Beyond the Beltway")
My life's my own ("Beyond the Beltway")
I go to sleep each night with peace of mind.

Sometimes as I drive, along 495,
I can see an angel in the sky,
As he plays his golden horn, I can feel myself reborn,
I know my exit's comin' by and by.

I got to be ("Beyond the Beltway")
Where I'm free ("Beyond the Beltway")

Like a little fish that swims the deep blue sea
Now I don't shirk ("Beyond the Beltway")
A little take-home work ("Beyond the Beltway")
But I know that my soul belongs to me.

They say some other men, live their three score and ten,
In places where the trees outnumber cars,
Where upon a mountain's peak, one can almost hear God speak,
But I doubt their salaries are as good as ours.

I got to be ("Beyond the Beltway")
Relatively free ("Beyond the Beltway")
I'm pretty happy I guess in my own way
Our condo's nice ("Beyond the Beltway")
It's gone up in price ("Beyond the Beltway")
I'll be a GS-7 soon they say.

I got to be ("Beyond the Beltway")
Where I'm free ("Beyond the Beltway")
Where a man can expand to be all that he can be
My folks live there ("Beyond the Beltway")
In Grosvenor Square ("Beyond the Beltway")
And only home with them can I be "M" "E" me.⁷⁰²

Greenbelt resident Dorothy Sucher's song "Moon Over the Beltway," performed and recorded as part of a musical comedy revue in 1976, tells of a melodrama set against the Capital Beltway, with additional local references (Giant supermarkets, federal government terminology) thrown in for good measure:

Moon Over the Beltway
By Dorothy Sucher

(Tango with traffic noises)

I lost my lover on the Beltway
'Twas in a carpool that we met—
That magic day I felt his hand stray,
Why didn't I play hard to get?
I knew that he was out of line
Beneath the Mormon shrine

⁷⁰² Richard Schuman, "Beyond the Beltway." Reprinted by permission.

I wasn't very smart;
I felt my pulse accelerate,
He asked me for a date
And it was Rush Hour in my heart!

REFRAIN:

And there was a—
New Moon over the Beltway when we met
Full Moon over the Beltway when we kissed
Blue Moon over the Beltway when we parted
My Beltway lover left me broken-hearted.

I gave the green light, I was pliant,
And for a while we were in heaven
I was a checkout girl at Giant,
He was a suave G.S. Eleven.
I guess I should have used the brake
For he was on the make
But I was unobservant—
I learned his love was temporary
And he was just a very
Uncivil civil servant! (Refrain)

Day by day, his love grew colder
At last he dropped me—on the shoulder.
I was too hurt to make a fuss
I told him I would take the bus.
The Air Pollution Index was high
I didn't cry
But smog got in my eye.
He shifted into overdrive—
Oh, how will I survive?—
He vanished up I-95! (Refrain)

Yes, now without a question
There'll always be congestion
Deep within my heart!⁷⁰³

In the first verse of her song and in the third verse of his (referring to the angel),
Sucher and Schuman invoke the most prominent visible icon in the Beltway landscape,

⁷⁰³ Dorothy Sucher, "Moon Over the Beltway," written for the Hexagon Revue "Barbs and Snipes Forever," 1976, reprinted by permission.

the Washington Temple of the Church of Jesus Christ of Latter-Day Saints (actually in Kensington, Md.), which she refers to as the Mormon Shrine. More than any other single physical element, the temple characterizes the experience of driving on the Beltway, cited repeatedly by my survey respondents as their favorite part of the highway. Dozens of respondents liken the white temple, illuminated at night, to Oz and/or the Emerald City, though several compare it instead to Cinderella's castle at Disney Land and Walt Disney World. Before it was erased, the phrase "Surrender Dorothy" was spray-painted several times on a railroad bridge crossing the Beltway approaching the temple; many respondents cite this as their "absolute favorite part of the Beltway" or "the best graffiti I've ever seen," wishing that it would reappear.⁷⁰⁴ The temple and graffiti provide the backdrop for this haiku and joke:

Hit in a crash—thought
 I saw heaven ahead. No . . .
 The Mormon Temple. (Mary M. Stolzenbach, Vienna)⁷⁰⁵

How long does it take to drive from Georgia to Connecticut?
 About five minutes, if you don't wait for Dorothy to surrender.
 (Andrea Kelly, Brookville, Md.)⁷⁰⁶

For all of Maryland's and Virginia's efforts to create a safe and visually pleasant highway, it is this religious structure which has become the most loved aspect of the Capital Beltway and which provides the most positive association and memories for many who drive on it.

⁷⁰⁴ Beltway Surveys #379, 569.

⁷⁰⁵ "Bob Levey's Washington," Washington Post, 17 May 1990: C14.

⁷⁰⁶ "Style Invitational, Report from Week LIV," Washington Post, 4 March 2001: F2.

The Beltway serves as a community site in other ways as well. As on other highways, for instance, broken-down motorists are regularly surprised to find strangers stopping to assist and refusing any compensation.⁷⁰⁷ But the strongest sense of community is created by the Beltway's presence as both a common denominator, a social reference point, in the lives of Washington-area residents, and as a physical unifier which shrinks portions of two states and the District into a single 257-square mile "Beltland."⁷⁰⁸

Public or private space?

What people do within their homes is clearly a private concern; what they do in a public venue is not. But activities within a private vehicle on a public road fall somewhere between. A driver on the Beltway is secluded from other drivers by the confines of a vehicle (though less so if riding in a convertible), but still shares the larger space of the highway with thousands of other people. Like other roads, the Beltway is a liminal space in which drivers and passengers negotiate between public and private norms of behavior.

Surveillance cameras have put this tension to the test. Maryland and Virginia highway personnel monitor cameras along the Beltway 24 hours a day, as described in the prologue, to watch for and respond to traffic problems. Those cameras are strong

⁷⁰⁷ Beltway Surveys #239, 307, 322, 368, 436, 477, 604. On the flip side, respondents write of "tow sharks" who have taken advantage of them by quoting and charging exorbitant prices on the Beltway; see Beltway Surveys #12, 505, 517.

⁷⁰⁸ The figure appears in Sidey, 20.

enough to zoom in on what is happening in any particular vehicle or house. Highway officials in both states acknowledge that the cameras could be used in this way, but because doing so would constitute an inappropriate (and possibly illegal) invasion of privacy, they direct their employees not to focus directly on vehicles, homes, or offices in that level of detail. VDOT's Carlene McWhirt explains:

Yeah, we zoom in. We have full zoom capabilities. Our cameras can zoom in quite up close and personal. Our traffic controllers are real responsible . . . when you see something on the Interstate, you have to zoom in and see what's going on. Our controllers often are trained and instructed that they need to back off from the situation once they determine what's needed, what's going on, what's there. So that they can view the overall view of the incident, so they can see what's going on around the incident, be it a vehicle just stopped on the side of the road, or nature called. We don't know what they're doing until we zoom in. Well, then you zoom back out. It's not something we want to keep track of. And of course, when we turn our cameras, we tend to keep them on the highway, so that we don't encroach apartment buildings along the Interstate, or office buildings or parking lots, because we're dealing with stuff on the Interstate, so that's what we want to concentrate on. And that's a good thing.⁷⁰⁹

But exactly where to draw the line is hard to define. In 2000, despite the privacy policy, Maryland authorities used traffic cameras on I-95 north of the Beltway to identify 26,500 Maryland drivers and mail them letters as part of a mass transit survey, generating criticism from many of those contacted.⁷¹⁰

Drivers may prefer that authorities not spy on their activities on the road; at the same time, some drivers take advantage of the semiprivate space to engage in illegal activities. A Silver Spring resident, for example, recalls that "a friend who grew up here

⁷⁰⁹ Interview with Carlene McWhirt, January 23, 2001.

⁷¹⁰ M.J. Zuckerman, "Chances Are, Somebody's Watching You," *USA Today*, 30 November 2000: 1A.

said when it was new, they used to drive all the way around it smoking pot."⁷¹¹ This story is corroborated by a Kensington resident who not only smoked pot on the Beltway but grew it there in the road's early years:

I actually tried growing pot inside of the big curve of the cloverleaf at Kensington Parkway. And they grew, and I'd go and visit them once in a while, and then one time I visited and they weren't there. I don't know what happened to 'em. . . . But when you're 12 and 13, well, actually more like 14 and 15, and you're smoking pot a lot of times, believe me, you smoke wherever you can. And to a certain extent the Beltway provided us with opportunities to do it.⁷¹²

In fact, the Beltway is a venue for both drugs and sex. Andrew Gillespie and Michael Rockland cite several examples in discussing how "there is something about the [New Jersey] Turnpike that seems to excite sexual desire."⁷¹³ Perhaps the same "something" holds true for highways in general, or at least Interstates, given the first set of figures below from the Web survey:

Table 21.—Additional Personal Activities on the Capital Beltway
(607 responses)

<u>Activity (for drivers or passengers)</u>	<u>N</u>	<u>Percent</u>
Had a sexual and/or romantic experience	61	10.0%
Urinated or defecated	14	2.3%

⁷¹¹ Beltway Survey #78.

⁷¹² Interview with *Chris Parker.

⁷¹³ Gillespie and Rockland, 147.

Truckers on the Beltway, who have a clear view from above of what happens in the cars below, report "quite a bit of sexual activity from passing motorists."⁷¹⁴ Most of the survey respondents who claim to have had a sexual and/or romantic experience on the Beltway shy away from details with "no comment," "enough said," or "leave it at that." "I'm a grandmother," an Arlington resident writes, "and I don't want to draw that picture for you, it would embarrass both of us—tra la."⁷¹⁵

Those who do provide details suggest that Beltway sexual activity skews toward romantic kissing and oral sex. "This is very personal," writes a Falls Church resident, "but [I experienced] performing oral sex on the driver in a convertible with the top down—maybe not too unusual, but the top down part might be."⁷¹⁶ Others write of giving, receiving, or witnessing oral sex.⁷¹⁷ New Jersey resident Sharon Ranftle offers this bizarre experience of one man's attempt to find sexual gratification on the Beltway:

[O]ne time I was following a friend home to New Jersey, and she broke down. While waiting on the side of the road, a man pulled up. He had a camera, and he claimed to be from the Baltimore sun. He told us he was researching people who had broken down on the beltway, and how fast assistance came. He asked a few questions, and then requested a picture.

⁷¹⁴ Beltway Survey #603. In February 2001, I appeared on a live news program on Maryland Public Television to share the results in progress of my research and to answer viewers' calls. There was only time for one call, a general question about the need for better inter-suburban access. When the program ended, the red-faced producer told me that the first call he took—which he could not put on the air—was from, as he later wrote, a trucker who said that "from high up he has seen men and women playing with themselves."

⁷¹⁵ Beltway Survey #596.

⁷¹⁶ Beltway Survey #238.

⁷¹⁷ Beltway Surveys #83, 546, 614, 615.

After a picture of our faces, he pointed to my friend's feet. "You have beautiful feet", he said. "I'm also a recruit for foot models. Can I take a picture of your feet as well?" My friend complied. A few moments later, he'd convinced me to take my shoes off and photograph my feet as well. We were beginning to realize that this man was not from the Baltimore Sun, because a) his camera was disposable b) he'd neglected to interview us about Beltway breakdowns and c) he was getting overly excited about our feet.

After the first couple of pictures, he began to try to touch our feet, to arrange them in specific photos for his pictures. First, he touched my friend's feet, and then he tried to touch mine. I was scared, so I told him to go away, no more photos and especially no more touching. I was afraid as to how he would react, what if he lost control and was no longer "nice" to us because we weren't cooperating?

However, he did get back into his car. Before he pulled away, he lifted his camera to take a few more shots of us. He pulled in front of us one more time.

"Please?" he said. "Please let me take just one more picture of your feet, please!" His sexual enjoyment over this fiasco was now obvious.

"No!" We both yelled. Within a couple of moments, he was gone, and my friend and I were both aghast and disgusted over the experience. However, we now had a crazy story to tell.⁷¹⁸

Except in Ranftle's case, every sexual episode described by respondents was a conscious choice to engage in otherwise private activity in a semipublic venue.

This is not the case with drivers and passengers who find that they need to urinate or defecate. As noted above, even though it is in part a through highway, the Beltway does not have rest areas or other sanitary facilities. Drivers can exit and find gas stations or other retail establishments, but out-of-town drivers are uncomfortable about doing this and traffic jams often make it impossible in any case. "Hey, sometimes you can't hold it," a Greenbelt resident explains; a Hyattsville resident adds that "the severity of a traffic jam can be measured by the # of men one sees 'standing' on the

⁷¹⁸ Beltway Survey #619.

shoulder."⁷¹⁹ Both adults and children consequently find themselves forced to participate publicly in what under almost any other circumstances would be a very private activity.

To mask their actions and embarrassment, those in need resort to at least six different strategies. A Burke resident describes the nonchalant approach after being stuck behind an accident for over two hours:

Two hours later, I was still there, and the "need" had increased to monumental proportions. "Pain" would be an accurate word. I realized that the shoulder lane was beginning to move slowly, due to folks getting off at the next exit, so, with a little cooperation from other drivers I was finally able to move over to the right shoulder to join several other cars that had overheated engines or perhaps similar problems to mine. Due to the proximity of other drivers, male and female, and my natural shyness, I devised a process that included opening both the front and back doors on the passenger side of my car, and sitting very nonchalantly looking around as if I were just resting and enjoying the pleasant scenery, while taking care of my problem. I arrived home about 6 hours later than usual that night as did many other drivers.⁷²⁰

A University Park resident describes his application of the false breakdown strategy:

I had left work on my motorcycle and realized I needed to urinate. I'm not big on doing this in public, but it was urgent. I pulled over around georgetown pike, (outer loop) and was going to go over the bank. Just as I moved around the bike, a cop pulled up and wanted to know what was going on. I told him the bike was overheating I needed to let it cool down for ten minutes. He was satisfied and left. I took care of business and left.⁷²¹

Two respondents write of using "pee bottles" within their vehicles; a third has used a large blanket as a shield while standing on the shoulder, and another drives his large van

⁷¹⁹ Beltway Survey #212, 476. See also Sussman, "Best and Worst of the Beltway," 29.

⁷²⁰ Beltway Survey #524.

⁷²¹ Beltway Survey #517.

off the road and "after angling the vehicle for maximum concealment, I let 'er rip."⁷²² In all cases, the people urinating and defecating experience a sense of shame which they do not feel when engaging in sex, shaving, makeup application, or any other private activity mentioned in the survey responses. Drivers and passengers eagerly use the Beltway as private space, it seems, only when they freely choose to do so; when faced with no choice other than to engage in a normally private activity, they become more conscious of how public a space the highway actually is.⁷²³

Stirring the jurisdictional soup

In addition to its other roles, the Beltway also serves as an arena for mediation and compromise in inter-jurisdictional cooperation. Philosophical clashes between Maryland and Virginia, discussed earlier, are only the tip of the iceberg in considering limited regional cohesiveness at a policymaking level: Differing transportation priorities, economic competition, battles between developers and environmentalists, and pride have kept the Washington area's many jurisdictions at arm's length from each other. When regional authorities have been proposed, political leaders in individual jurisdictions (cities, counties, states, and the District) have generally been unwilling to place transportation decisions in the hands of a body which would not answer directly to their respective constituents. And even if jurisdictions agreed to cede their local

⁷²² Beltway Surveys #339, 86, 102, 453.

⁷²³ A similar tension between public and private space occurs within the Metrorail system. See Lyndsey Layton, "Public Primping Raises Eyebrows," Washington Post, 3 March 2002: A1.

autonomy to such an authority, its creation would come too late for many road projects which might have been appropriate at an earlier time.⁷²⁴

But the Beltway exists, and the Metro system does too. The regional jurisdictions thus are forced to cooperate in order to maintain and plan for these transportation facilities which cross multiple political boundaries.⁷²⁵ Who, though, is responsible for mediating these efforts to ensure that decisions make sense on a regional level, when each jurisdiction is most concerned about itself? Because there is no one overriding authority, several types of groups have stepped into the fray to speak on behalf of the region; these include the Metropolitan Washington Council of Governments, interest groups usually classified as "pro-developer" and "Smart Growth," and the media.

COG, the Metropolitan Washington Council of Governments, was created in 1957 as the Washington Metropolitan Regional Conference, to provide an apparatus for representatives of 18 local governments to work together on common issues.⁷²⁶ In 1966, COG became associated with the National Capital Region Transportation Planning Board (TPB)—the designated Metropolitan Planning Organization for Washington and several surrounding counties and cities—with hopes of forming a more powerful force

⁷²⁴ Peter Behr, "Area Leaders Hit Traffic Roadblock," Washington Post, 28 September 1997: A1; John Lancaster, "Coordinated Road Plans Collide With Jurisdictional Squabbles," Washington Post, 5 June 1988: A20. See also Douglas B. Feaver, "Commuters Caught in Squeeze," Washington Post, 14 July 1975: A1.

⁷²⁵ Efforts to work cooperatively over Metro are addressed in Zachary Schrag, "America's Subway: The Washington Metro as Vision and Vehicle, 1955-2001," Ph.D. dissertation, Columbia University, forthcoming.

⁷²⁶ Melder, City of Magnificent Intentions, 576-577.

"with the authority and will power to do what was best for the region."⁷²⁷ Even though its staff are COG employees, the TPB is an entity that is independent of COG's Board of Directors, and TPB decisions are not subject to review or revision by the COG Board. But the new body's authority was lacking; COG has no independent taxing power or ability to enforce its recommendations, and representatives to COG remained focused on their own constituents' interests. Moreover, because COG is funded heavily from federal sources with smaller matching contributions from participating jurisdictions, any jurisdiction which decided to withdraw would take away its own contribution to COG's funding plus the larger, corresponding share of federal funds; COG members thus had to be careful not to upset one another or advocate non-unanimous proposals.⁷²⁸

TPB's key weakness, though, has been its inability to enforce the decisions its members agree upon. "The Council of Governments," former Fairfax County Planning Board member Anne Wilkins said in 1974, "had no power—it still doesn't."⁷²⁹ Robert Grow, staff director for the Metropolitan Washington Board of Trade's Transportation and Environment Committee, points to TPB's benefits and weaknesses (while he refers directly to COG, he actually speaks of TPB's responsibilities and accomplishments):

COG is a tremendous resource in planning. They've done excellent planning work. They have excellent ability to coordinate, for example, forecasts and develop data for the region, and run the traffic models. When it comes to implementing, though, they're not an implementing organization. The states provide the inputs to the long-range plan. COG, given its role as a metropolitan planning organization, makes sure that these are funded, are all in the same package. They do conformity analysis, make sure that it doesn't exceed the air

⁷²⁷ Kaye, "Traffic Terror," 118.

⁷²⁸ Ibid.; Grier, "Washington: A Beltway," 49.

⁷²⁹ "An Interview with Mrs. Anne Wilkins," 23.

quality limits for the region. So in terms of implementing, they don't have powers to implement. They have powers to provide for regional thinking and hopefully coordination.⁷³⁰

"Hopefully" is the key word, because of the lack of enforcement powers. "This organization is never going to have 'teeth' in the sense of being able to overrule local jurisdictions," COG transportation planning director Ronald Kirby acknowledged in 1988. "We can only act as a forum for them to thrash out their particular interests."⁷³¹ Like virtually every other Metropolitan Planning Organization in the country (except for Portland, Ore.), the TPB and COG are not empowered to require that their member jurisdictions enact specific land use plans.

What can the TPB do? It can provide quantitative data, such as vehicle counts on roadways and forecasts of future traffic volumes and transit ridership, to local jurisdictions to help them in making decisions. It can bring key regional transportation issues to the forefront, as it did in 1988 by including the widening of the Wilson Bridge in its regional long-range transportation plan.⁷³² And TPB can bring squabbling jurisdictions together in one place, as in 1986 when it joined the Board of Trade in sponsoring a conference titled "Solving the Problem of Greater Washington's Main Street," attended by 250 political and business leaders and transportation planners intent on improving the Beltway. But even though attendees agreed strongly that the Beltway was an urgent problem, TPB's lack of enforcement power rendered the conference "a

⁷³⁰ Interview with Robert Grow, January 10, 2001.

⁷³¹ Qtd. in Kaye, 49.

⁷³² See John Lancaster, "Beltway Rush-Hour Commuters Find the Going Getting Slower," Washington Post, 21 April 1988: D1.

giant work session, where the participants acknowledged and studied the problem and possible solutions while stopping short of making decisions."⁷³³ In May 1998, a National Capital Region Congestion and Mobility Summit was held in Washington, co-sponsored by the U.S. Department of Transportation, the Maryland and Virginia Departments of Transportation, the D.C. Department of Public Works, the Washington Metropolitan Area Transit Authority, and the TPB. Participants discussed a variety of transportation issues, including financing and Beltway congestion relief.⁷³⁴

Special-interest groups have joined the fray, advocating specific transportation policies for the benefit of the region. One major faction, including business groups (led by the Greater Washington Board of Trade) and highway-user organizations (particularly AAA), pushes for an expanded transportation network including more transit but especially additional and widened highways and bridges.⁷³⁵ Although the Board of Trade—with 1200 constituent members including major corporations, nonprofit organizations, and universities—works toward improved transportation for the area, its primary responsibility is to the commercial sector. Robert Grow explains:

[Our advocating specific projects is] to the benefit of the whole community. . . . We get enough input so that we can understand everybody's view and what the needs of the general community are. But our members come first, and they provide us with the general direction. And we give a reality check on that

⁷³³ Sue Anne Pressley, "Officials Tackle Beltway Problems," Washington Post, 15 March 1986: G1.

⁷³⁴ See Alice Reid, "Summit Explores Way Out on Roads," Washington Post, 29 May 1998: D1.

⁷³⁵ Van Dyne, "As Far as the Eye Can See," 101; Stephen C. Fehr, "Officials Have Dropped Plans for 13 Highways Since 1961, Study Finds," Washington Post, 25 February 1997: B4.

by getting input from others.⁷³⁶

The Board of Trade and its business constituents have tried to help shape regional transportation decisions by offering strong support for eastern and western bypasses to the Beltway and by sponsoring organizations reaching out to drivers concerned about congestion. Among these have been the DO IT Coalition (formed in 1987, an acronym for Develop Outer Interstate Throughways), which in 1988 published a "Capital Beltway Owner's Manual" with driving tips and proposed improvements including bypasses; and endgridlock.org (formed in 1999, formerly the Coalition for Better Mobility), encouraging public participation via the Internet.⁷³⁷

⁷³⁶ Interview with Robert Grow.

⁷³⁷ On the DO IT Coalition, see Kaye, 112; Steve Bates, "Beltway 'Owner's Manual' Out," Washington Post, 29 December 1988: B7; Ed Bruske, "Snowstorm Spurs Plan for Relieving Beltway Congestion," Washington Post, 17 November 1987: B3; and DO IT Coalition, "The Capital Beltway Owner's Manual" (n.p.: DO IT Coalition, Winter 1988-1989). On endgridlock.org, see <<http://endgridlock.org>> (15 November 2001); Alan Sipress, "Environmentalists Question Origin of New Road Group," Washington Post, 9 March 2000: B2; and "AAA Fights Congestion with endgridlock.org," AAA World, November/December 2001: 40.

On the Eastern Bypass and the Western Transportation Corridor—two bypasses promoted by the Board of Trade, the DO IT Coalition, and others in the 1980s and 1990s—see Van Dyne, "As Far as the Eye Can See," 103; Van Dyne, "Getting There," 208-210; Mike Barnes, "The Beltway, in Critical Condition," Washington Post, 20 August 1989: B8; Stephen C. Fehr, "An Ambitious Gridlock Remedy," Washington Post, 13 May 1990: A1; Stephen C. Fehr, "Bypass Could Become the Battle of the Decade," Washington Post, 14 May 1990: A1; Leo Schefer, "Virginia's Dream," Washington Post, 10 November 1996: C3; Douglas M. Duncan, "Our Nightmare," Washington Post, 10 November 1996: C3; Katharine Carlon, "Road to Nowhere?" Fairfax Journal, 9 February 1997: A1; Spencer S. Hsu, "Allen Pushes I-95 Bypass in N. Virginia," Washington Post, 18 March 1997: B1; Alice Reid and Michael D. Shear, "Road War Brews for Growth Foes," Washington Post, 19 May 1997: B1; Ann O'Hanlon, "Multimillion-Dollar Study is Approved for Western Bypass," Washington Post, 19 September 1997: B1; Spencer S. Hsu, "Va. Senate Votes to Halt Action on Bypass Plan," Washington Post, 27 February 1998: B1; Justin Blum, "Backers of Bypass Turn to Va. House for Support," Washington Post, 28 February 1998: B5;

A second faction includes groups with environmental and social concerns, whose members argue against accepting continued low-density development and highway expansion and for a shift toward mass transit and other alternatives along with new planning models (such as transit-oriented development).⁷³⁸ In Maryland, this faction incorporated the state's political leadership in the 1990s, especially through Gov. Parris Glendening's Smart Growth policies. In Virginia, like-minded residents chose the Beltway as a springboard to push their broader views from this approach.

In the ongoing Virginia Beltway improvement study, covered in Chapter 6, the Coalition for Smarter Growth has repeatedly rallied Northern Virginia residents to fight VDOT's proposals for additional lanes (and other proposals), in favor of other alternatives. Paul Hughes, the coalition's cofounder, explains that the Beltway, while important, is not his group's overriding concern; he and other local Sierra Club members found the Beltway useful as a vehicle for taking a stand against sprawl.

We looked at how we would move or motivate people in Fairfax County on that issue, since [the sprawl is] out there about 50 miles from here, 40, something like that. We kind of came to the conclusion after meeting with groups from Loudoun, Prince William, and Fauquier . . . we couldn't move people here locally on that issue. There would just be no traction for it. . . .

So, looking at that, it's a worthwhile battle and everything else, but how to relate it to our folks? So we had to back away, and it kind of just came to us, frankly,

"Bypassing Reality in Richmond" [editorial], Washington Post, 2 March 1998: A16; Alan Sipress, "Federal Officials Pass on N. Virginia Bypass," Washington Post, 22 August 1998: D1; Dan Eggen, "Transit Wish List for N. Va. Increases," Washington Post, 15 December 1999: B1; R.H. Melton, "Va. Lawmaker Aims to Block Western Bypass," Washington Post, 8 February 2001: B1; R.H. Melton, "Va. Senate Moves to Block Western Bypass," Washington Post, 9 February 2001: B1; and Katy Johnson, "Why Won't Virginia Take No For an Answer on This Misbegotten Road?" Washington Post, 10 June 2001: B8.

⁷³⁸ Van Dyne, "As Far as the Eye Can See," 102.

just thinking about what would resonate here, and what was timely in terms of our still being able to affect it. And that turned out to be the project that was involved with the widening of the Beltway. . . .

The idea [was] to take what is essentially, the Beltway, which is essentially Northern Virginia's Main Street, such as it is, that everybody travels, you know, generally once or twice a day, probably, but at least it's probably the most frequently traveled road in Northern Virginia. High visibility in terms of it was just taking off. VDOT was coming in like gangbusters, saying, you know, it's all but a given that we're gonna widen this thing to 12 lanes. And we thought, why not, with the beginning of these public hearings and everything, use this as a basis for starting to jump on VDOT for just such a pro-highway, widen, more bridges, pro-highway type of position, as the sole solution, apparently, to traffic congestion in Northern Virginia. And we thought by doing that, yes, we'd have a lot of NIMBYs along the Beltway. But, we could begin to gradually educate them as to what is Smart Growth, why it's necessary to be thinking of transit alternatives instead of just a knee-jerk "Let's widen two more lanes, that'll solve the problem" attitude. . . .

So that was what we settled on as our reason for being, if you will. . . . [W]e gradually used this as a vehicle to educate people about why you should have transit-oriented development rather than highway widening and everything else. We stimulated activism in neighborhoods that never even thought twice about this kind of stuff in the past, and essentially started with that Beltway project, and since then have gotten involved in several other major transportation projects.⁷³⁹

Hughes's group used the Beltway, in his words, as a vehicle toward greater ends, similar to the political and religious appropriations of the highway discussed earlier in this chapter. The link between the group's broader goal (alternative planning policies) and tool for reaching it (Beltway protests) is apparent in the names of the group itself and its website—the Coalition for Smarter Growth and www.smartergrowth.org—and the newsletter it published beginning in 1998, "Beltway Alert."

Finally, the Washington media also mediate among the Beltway's jurisdictions. In this study, I have been drawing extensively from the print media, especially the

⁷³⁹ Interview with Paul Hughes, 21 January 2001.

Washington Post and Evening Star, in examining the Beltway's conflicts and communities, because few other sources offer the same breadth of coverage. But those newspapers are players themselves, not disinterested observers. The Star (which ceased publication in 1981) and Post have long been highway advocates—though the Post has also been a strong supporter of Metro and other modes of transportation—and other local media outlets have similarly backed, or fought against (in the case of some smaller community newspapers) highway projects.

Like COG, the Board of Trade, and the Coalition for Smarter Growth, editors at The Washington Post have tried to compensate for the absence of a regional transportation authority by working toward what they consider to be the entire area's best interests. *Pat Boyer, a longtime member of the Post's editorial staff, explains that the paper's editors hope in their editorials to benefit the wide body of readers.

Almost all of our editorials, we hope we're speaking for people and not for corporations or for our purposes as an entity here. But for moving people around, for the quality of life. The quality of life is a very important factor to us in Washington. The Graham family [who owns the Post], and Eugene Meyer before that, have always thought of the Post as a local paper. If you ask [Washington Post Company chairman] Don Graham or [publisher] Bo Jones right now, they would say the same thing. We consider ourselves a local paper; we don't distribute in the same manner as the New York Times or the Wall Street Journal or USA Today. There's a certain purpose to that. And although, again, The Washington Post is known globally, and that's no bad thing, it's still thought of, we think of the people here, and of promoting the region. And we try to editorially avoid intra-regional partisanship because again we want to speak for the entire region.⁷⁴⁰

But like the Board of Trade, regional interests sometimes conflict with the newspapers' own concerns. Through the 1980s and 1990s, the Post repeatedly ran editorials advocating a new or radically altered Wilson Bridge which would still include a

⁷⁴⁰ Interview with *Pat Boyer, 3 January 2001.

drawbridge, an aspect of the bridge anathema to commuters who saw few ships passing through. However, as the editorials often noted, and as former Post writer Douglas Feaver points out, "[w]e all know the Post has a vested interest in the newsprint delivery to a pier in Alexandria [Robinson Terminal] which requires raising the Wilson Bridge."⁷⁴¹ Similarly, the paper's general pro-highway stance is consistent with its "underlying economic interest in a functioning transportation system . . . The Post does have to distribute newspapers, and a good road network helps you distribute your newspapers."⁷⁴²

Why does the Post's stance matter? For one thing, the way in which it and other print and nonprint media present the Beltway and other transportation issues over time normalizes certain expectations and understandings. "In the long run, of course, a beltway bypass has got to be built," the Post editorialized in 1989, and a "Potomac crossing must also be built," it added in 2001, but in reality there was no "of course" or "must" about it unless readers chose to accept and internalize the paper's assumptions.⁷⁴³

Since at least the 1980s, the paper's coverage of the Beltway has regularly followed a formula implying that the road is a problem requiring certain solutions. Articles usually focus on a specific problem (e.g., an accident), quote one or two frustrated drivers, quote a AAA or Board of Trade spokesperson explaining why

⁷⁴¹ Interview with Douglas Feaver, 26 January 2001.

⁷⁴² Ibid.

⁷⁴³ "Beltway Progress . . ." [editorial], Washington Post, 26 February 1989: C6;
"Roads—and Campaign Trails" [editorial], Washington Post, 30 November 2001: A39.

Beltway conditions are so bad and what can be done, and cite a study (often from AAA, the Texas Transportation Institute, or the American Highway Users Alliance) indicating that the Beltway and/or Washington area traffic is among the worst in the country. If space allows, articles add a quote from a nationally recognized transportation expert (often Alan Pisarski) and/or a quote from a Smart Growth-oriented group offering alternative solutions.⁷⁴⁴ By structuring articles in this way—or in any other way—the Post's reporters decide whose voices and which ideas get public exposure. Paul Hughes describes his exasperation at trying to have his group's ideas heard:

Just the sheer constant, what do you want to say, strain of trying to get visibility for your position in the media. You know, they'll quote the Board of Trade, the Northern Virginia Transportation Alliance, they'll quote the Fairfax Chamber of Commerce. And oh, by the way, I guess we need to get a quote from somebody; they'll either go to Stewart Schwartz or go to us, and they'll end up with maybe a little paragraph or blurb down near the bottom. . . . And it's like they have to—any dutiful reporter is supposed to give both sides, both opinions on both sides, and they kind of throw the perfunctory bone out there to those environmentalists or Smart Growthers. And that's it!⁷⁴⁵

In addition to determining which ideas and voices are "normal" and deserve prominence, the media also influence transportation policy by sensationalizing policy decisions and sometimes scaring them off the table in the process. Frustrated Maryland officials in 2001 found that the media had made the decision for them concerning one potential Beltway improvement. SHA officials carefully considered testing ramp meters—already in use along Virginia's I-395 and I-66 and in Minnesota and

⁷⁴⁴ See, for example, Jamie Stockwell, "Minor Crash Leads to Rush-Hour Nightmare," Washington Post, 18 January 2001: B3.

⁷⁴⁵ Interview with Paul Hughes.

elsewhere—in which special traffic signals along on-ramps detect gaps in traffic and allow a few vehicles at a time onto the highway.⁷⁴⁶

Although the State Highway Administration was not at all convinced that ramp meters would work anywhere in Maryland, let alone on the Capital Beltway, newspaper accounts made it sound as if the meters were a done deal. Raymond McCaffrey's Post article in January 2001 gave conflicting signs on whether the meters and their testing were definite (emphases added): The headline ("Stoplights Considered for Beltway On-Ramps") and first sentence ("Maryland may soon turn to a new weapon) contradicted the subheading ("Md. to Test Device Designed to Reduce Traffic Congestion").⁷⁴⁷ From the ambiguity and from the article's discussion of why Minnesotans hate ramp meters, readers, including politicians, feared that ineffective ramp meters were imminent on the Beltway.

The SHA quickly distributed an information sheet stressing that "Maryland State Highway Administration (SHA) is currently investigating the use of ramp meters and has not made a commitment to install this traffic device along Maryland's highway system."⁷⁴⁸ But public outcry overrode SHA plans, to its staffers' frustration; District 3 engineer Charlie Watkins explains that

⁷⁴⁶ See "Minnesota Tries Going Without Highway Meters," Washington Post, 22 October 2000: A19; and Kaye, 115.

⁷⁴⁷ Raymond McCaffrey, "Stoplights Considered for Beltway On-Ramps," Washington Post, 3 January 2001: B1. See also Tom Ramstack, "Beltway Stoplight Proposal Faces Test," Washington Times, 2 January 2001.

⁷⁴⁸ [Maryland State Highway Administration,] "Ramp Metering," typescript document, January 2001.

what the media has done, they have a tendency to do this, they want some news. So they took what they heard, and what they did was, what the State Highway was talking about, trying, talking about identifying locations that they might try. And the next thing, you know, ramp metering is gonna happen tomorrow! And that's not the case at all. I mean, there's no decision been made, whatsoever, that we're going to be ramp metering anywhere in Maryland. It's something we're looking at, a possibility, whether it makes sense. And I don't particularly think—I can't think of an interchange on the Beltway that would make sense.⁷⁴⁹

Taking ramp meters off the table was likely not the media's intention in bringing the proposal to the public's attention. But in their efforts to cover issues of regional transportation, the media play important roles themselves in helping to determine the formation of policy and public opinion. Like other would-be regional coordinators, media outlets operate with their own interests in mind as well as those of their constituents. With COG relatively powerless and the other groups mentioned motivated in part by self-serving objectives, the many Washington-area jurisdictions struggle to cooperate and even to coordinate on transportation issues, with the Beltway and other facilities hanging in the balance.

A catalyst for development?

Beyond the many ways in which it has structured individuals' lives and influenced regional political and social dynamics, the Beltway has also spurred commercial and residential development near its path. This effect may seem self-evident for Washington's Main Street, but in fact it runs counter to the way most

⁷⁴⁹ Interview with Charlie Watkins.

beltways have played out nationwide. In this sense, the Capital Beltway represents the exception, not the rule.

Most studies of beltways have focused on economic and land-use impacts rather than a broader spectrum of social, political, and cultural effects as I have done here. Christopher John Sutton, in a 1995 dissertation on Denver beltways, offers the most current literature review of works on circumferential highways, and concludes to his surprise that they do not generally have the economic effects often attributed to them. Below, I briefly summarize the studies Sutton mentions, in addition to one other and his own, to set up the framework for beltways' economic impacts which the Capital Beltway goes against.

In the first study of an urban circumferential highway, A.J. Bone and Martin Wohl concluded in 1958 that Massachusetts Route 128 around Boston "influenced a shift in jobs from the central city, but effects on residential patterns were inconsistent."⁷⁵⁰ A 1968 study of the Virginia portion of the Capital Beltway itself, led by Julia Connally at the University of Virginia, found that development in that corridor "followed the classic suburban development pattern: radial expansion from the central city along major highways with clustering of new growth around existing communities."⁷⁵¹ Although Connally attributed increases in land value directly to the

⁷⁵⁰ Sutton, "The Socioeconomic, Land Use, and Land Value Impacts of Beltways," 43; A.J. Bone and Martin Wohl, Economic Impact Study of Massachusetts Route 128 (Cambridge, Mass.: MIT, 1958).

⁷⁵¹ Sutton, 44.

Beltway, she argued that the highway itself did not cause growth; it only directed the pre-existing growth towards itself.⁷⁵²

Focusing on the St. Louis beltway, Peter DeLeon and John Enns found in 1973 that the road provided increased access which stimulated industrial employment density, but the short time span of their study (1965-1970) was not necessarily applicable to a long-range analysis.⁷⁵³ Snehamy Khasnabis and Willard Babcock concluded in 1975 that the Raleigh, N.C. beltway had a positive impact on residential, commercial, and industrial development.⁷⁵⁴ But a 1978 study of Richmond, Virginia's beltway supported Connally's analysis of the Capital Beltway in arguing that the highway had very minimal influence on the form of the city and region because decentralization would have happened regardless of the beltway's presence.⁷⁵⁵ In 1983, Mark Cundiff found in his master's thesis research that Dayton, Ohio's noncorridor suburbs (through which its beltway did not pass) did not oppose a forthcoming beltway because their leaders believed that the road would create broader regional economic growth, even in communities not directly adjacent. However, Cundiff's work did not

⁷⁵² Ibid.; Julia Connally, The Socio-Economic Impact of the Capital Beltway in Northern Virginia (Charlottesville, Va.: University of Virginia, Bureau of Population and Economic Research, 1968).

⁷⁵³ Sutton, 43; Peter DeLeon and John Enns, The Impact of Highways Upon Metropolitan Dispersion: St. Louis (Santa Monica, Cal.: Rand Institute, 1973).

⁷⁵⁴ Sutton, 43; Snehamy Khasnabis and Willard Babcock, Impact of a Beltline Type of Freeway Upon a Medium-Sized Urban Area of North Carolina: A Case Study (Raleigh, N.C.: University of North Carolina, 1975).

⁷⁵⁵ Sutton, 44; Urban Institute, The Impact of Beltways on Central Business Districts: A Case Study of Richmond (Washington: Urban Institute, 1978).

account for actual economic effects, since at the time of his study Dayton's beltway was not scheduled to be completed for at least eight years.⁷⁵⁶

"Perhaps the most comprehensive analysis of beltways," Sutton writes, was an exhaustive 1980 study, introduced earlier in Chapters 5 and 7, by Payne-Maxie Consultants for the U.S. Departments of Transportation and Housing and Urban Development.⁷⁵⁷ Payne-Maxie conducted a general analysis of 54 cities with population greater than 100,000 (27 with beltways and 27 without) and a more detailed analysis of eight, attempting to better understand beltways' effects on land use and development.⁷⁵⁸ The report concluded that "[i]mpacts on land use and regional growth are only marginal at best, with no statistically significant relation between beltway construction and distribution of population and residential patterns."⁷⁵⁹ Sutton notes certain shortcomings in the study, however: Payne-Maxie focused on inter-urban comparison of entire metropolitan areas where many external factors may have influenced growth but were not accounted for; the study analyzed data at the census tract or city level, so specific impacts in areas immediately surrounding beltways were not addressed; and Payne-

⁷⁵⁶ Mark Stephan Cundiff, "The Impact of Beltways on Metropolitan Areas: The Interstate 675-Dayton Metropolitan Area Case Study," M.A. thesis, Wright State University, 1983, 79-80.

⁷⁵⁷ Payne-Maxie Consultants, The Land Use and Urban Development Impacts of Beltways: Final Report (Washington, 1980); Payne-Maxie Consultants, The Land Use and Urban Development Impacts of Beltways: Executive Summary (Washington, 1980); Payne-Maxie Consultants, The Land Use and Urban Development Impacts of Beltways: Case Studies (Washington, 1980).

⁷⁵⁸ Sutton, 44-45.

⁷⁵⁹ Payne-Maxie Consultants, The Land Use and Urban Development Impacts of Beltways: Final Report, 83.

Maxie did not fully consider the "effect of increased highway mileage (resulting from beltway construction) on growth and land-use changes within a metropolitan area."⁷⁶⁰

Although Payne-Maxie concluded confidently that beltways' impacts on land use and regional growth were marginal at best, the studies cited share no consensus, although they agree that for most beltways the primary use has shifted from inter-urban (as originally anticipated) to intra-urban.⁷⁶¹ In any case, Sutton points out, those studies contain too many serious flaws to be definitive: For example, their levels of analysis are almost always too general (i.e., data collected at the metropolitan level) or too detailed (e.g., individual lots) to gauge trends within beltway corridors, and their study periods are too short (often five to ten years) to measure change, to recognize overall patterns of development, or to account for short-term development peaks and lags. Nor do many of the studies address the full variety of interdependent factors affecting beltway corridor development, including business cycles, dynamics of land ownership, planning and development initiatives, zoning, government philosophy, and environmental considerations.⁷⁶² Consequently, Sutton notes, even though beltways' effects on urban form have been debated since Massachusetts Route 128's construction in the 1950s,

there is no clear focus regarding what specific impacts beltways have, if any at all. It is not clear from the literature whether circumferential routes induce growth . . . , redirect growth as urbanization overtakes the beltway location, or merely accommodate the outward growth already occurring.⁷⁶³

⁷⁶⁰ Sutton, 45-46.

⁷⁶¹ For this reason, the first Bush administration tried to remove beltways from the Interstate system in 1990, "arguing that most beltways are technically not 'interstates' because they primarily carry local traffic." See Sutton, 47.

⁷⁶² Sutton, 12-13.

⁷⁶³ *Ibid.*, 5.

Looking for more definitive answers, Sutton's 1995 research studied the effects of two Denver beltways on population and employment growth and densities, land-use types and intensities, and land values.⁷⁶⁴ The study comprised three stages: first, Sutton examined population and employment densities within the I-225 corridor (Denver's older beltway) to see if they were higher than in other areas equally distant from the city's central business district; second, he looked at changes in land use (residential, office, and commercial) and land value in the I-225 corridor over a 30-year period (1960-1990) relative to changes in the entire Denver metropolitan area; third, Sutton compared the results from the first two phases to the development within the C-470 corridor (Denver's newer beltway).⁷⁶⁵

Sutton's results are consistent with Payne-Maxie's analysis that beltways were not the catalysts they appeared to be. Denver's beltways, he finds, had marginal influence on the locational decisions for commercial and office space; most commercial development was instead oriented along arterial roads. Office densities in fact increased with distance from the beltways. Residential development within the beltway corridors fit into ongoing decentralization patterns and did not represent fluctuations responding directly to the beltways. Nor were land values significantly influenced based on their proximity to the circumferentials.⁷⁶⁶

⁷⁶⁴ Ibid., 6.

⁷⁶⁵ Ibid., 259-260.

⁷⁶⁶ Ibid., 265-271.

Beltways, Sutton concludes, are not a major economic catalyst. Development within beltway corridors appeared to be influenced less by beltways and more by "fluctuations in the economy of the metropolitan area as well as the general pattern of suburbanization."⁷⁶⁷ Development did not occur along the Denver beltways well in advance of the city's decentralizing urban wave (this type of "leapfrog development" would suggest that the beltways induced the new growth). "Thus, to label the metropolitan area's beltways as 'causes' or 'inducers' of growth is unwarranted. Such routes merely lie within the path of an outwardly expanding urban area and do not serve to 'pull' growth outward."⁷⁶⁸ Finally, Sutton argues, beltways alone were not reliable strategies for new growth:

Thus, it seems improbable that construction of a beltway . . . in the undeveloped urban periphery will result in significant development without the presence of a guiding force, i.e., already expanding urban development reaches the route, or, in the case of Denver, the siting of a growth catalyst—i.e., major international airport—beyond the route.⁷⁶⁹

Instead, he suggests, the larger significance of beltways is their effect on "the functions found in suburban areas." As in the Washington area, inter-suburban movement of people, goods, and services previously had to move through the central city, until "[c]ircumferential highways significantly altered the ability of suburban locations to become functionally independent from central cities" and permitted the decentralization of activities traditionally located downtown.⁷⁷⁰

⁷⁶⁷ Ibid., 272.

⁷⁶⁸ Ibid., 276.

⁷⁶⁹ Ibid.

⁷⁷⁰ Ibid., 278.

Sutton's primary arguments are well-founded—for Denver. While his case is compelling for beltways not causing growth by themselves, the Capital Beltway clearly did induce development in its immediate corridor. In fact, after its original national defense justification wore off, the Capital Beltway became explicitly a tool for increased growth in the eyes of Washington-area planners. In the National Capital Transportation Agency's 1962 regional plan, Darwin Stolzenbach wrote that the "Capital Beltway is the framework for future regional industrial and commercial as well as residential development."⁷⁷¹ Fairfax County planners Willard Smith and Veril Tielkmeier in 1964 predicted intensive commercial and residential growth close to the Beltway; in Maryland, M-NCPPC planner C. Warren Giauque expected "the Capital beltway . . . to pull people to it like a magnet."⁷⁷² Federal Highway Administration economist Martin Stein noted in 1972 that he and his colleagues were not surprised by the development itself they had seen around the Beltway, but rather by its speed: "We knew that people were going to do this, but we didn't know they were going to do it so fast."⁷⁷³ Even in 1984, some 25 years after the initial construction boom around the nascent Beltway's right-of-way, the \$290.6 million worth of construction initiated along the highway would have ranked it alongside the totals for commercial construction in

⁷⁷¹ National Capital Transportation Agency, Transportation in the National Capital Region: Finance and Organization (Washington: General Printing Office, 1962), 43.

⁷⁷² Daniel Poole, "New Highway Expected to Be Spur to Development of Outer Suburbia," Evening Star, 16 August 1964: E-8.

⁷⁷³ Qtd. in Boldt, "Beltway: Planning Problem," B5. See also Jack Eisen, "New Road to Bring Vital Area Changes," Washington Post, 16 August 1964: B13.

Milwaukee, Birmingham, and Honolulu, if the Beltway were considered an independent city.⁷⁷⁴

During the Beltway's construction and in its early years of operation, many communities alongside rezoned adjacent land for commercial use, figuring that commercial development would expand their tax bases (unlike new residences, which carry additional needs for public services). Real estate developers jumped at the opportunity to buy the land for new projects because it was cheaper than alternatives in downtown Washington.⁷⁷⁵ However, the Beltway had significantly different effects on different areas depending on the extent of previous development in each area.⁷⁷⁶

For example, the Fairfax County portion of the Beltway had been mostly open countryside, as described in Chapter 4. As construction began in the late 1950s, approximately 57 percent of the land within two miles on either side of the Beltway's right-of-way was vacant, with another 41 percent residential. County planners rezoned hundreds of vacant acres for high-density use, and developers came running. Within that Beltway corridor, 450 apartment units existed as construction began in 1958; more than 3500 new ones were built by 1965.⁷⁷⁷ The director of the Fairfax County Industrial Authority said in 1964 that "beltway land is being sought by industry more than any

⁷⁷⁴ Kenneth Bredemeier, "Beltway Becomes Area's Main Street," Washington Post, 17 February 1985: A1. See also Jack Eisen, "Socially and Businesswise, the Beltway Becomes a Hit," Washington Post, 5 January 1964: K1.

⁷⁷⁵ Van Dyne, "Getting There," 203.

⁷⁷⁶ See Truman R. Temple, "Mixed Blessing Seen in Industrial Highway," Evening Star, 30 March 1961: B-12.

⁷⁷⁷ Martha Angle, "City's Concrete Circle Guides Boom," Evening Star, 23 March 1966: D-1.

other property in the county. . . . At least two major concentrations, Westgate and Ravensworth Industrial Parks, exist purely because of the beltway."⁷⁷⁸ Fairfax County credited the Beltway with bringing 7500 new jobs within its boundaries by the time the road opened.⁷⁷⁹ Historian Nan Netherton, echoing Sutton's warning, notes that "Fairfax County was well on its way to becoming urbanized before the beltway was begun. Nevertheless," she adds, "the size of an average parcel of land in the vicinity of the beltway [in Fairfax County] fell from 1.5 acres in 1951 to .5 acres in 1964, and during the same period, the average price of improved residential land close to the beltway increased from \$1,900 to \$16,700 an acre."⁷⁸⁰

But that was Fairfax County, where 57 percent of adjacent land had been vacant. In contrast, Montgomery County had no industrially zoned land at all in the Beltway corridor, and hardly any vacant land of any kind. Unlike in Virginia, the Beltway in Montgomery County passed through heavily populated neighborhoods (Fig. 11), with results described in Chapter 5. "There was very little open space left except for occasional chunks at interchange corners where developers had held back in hopes of getting high-density zoning," county planning board member Blair Lee III explained in 1966.⁷⁸¹ Leading Montgomery County developers were not especially perturbed about

⁷⁷⁸ Ibid.

⁷⁷⁹ Charles Covell, "Beltway Attracting Industry, Creating New Labor Markets," *Evening Star*, 16 August 1964: E-6.

⁷⁸⁰ Netherton et al, *Fairfax County, Virginia*, 598. See also Robert C. Burton and Frederick D. Knapp, "Socio-Economic Change in the Vicinity of the Capital Beltway in Virginia," *Highway Research Record* 75 (Washington: Highway Research Board, 1965).

⁷⁸¹ Qtd. in Angle, "City's Concrete Circle."

missing out on the same opportunities as their Virginia counterparts, though, because they expected much more vacant land to be available adjacent to the forthcoming Outer Beltway elsewhere in the county—which in the end was never built.⁷⁸² Although the price of land near the Beltway in both states rose after the road opened, the effects on growth were far more pronounced in Fairfax County.⁷⁸³

Prince George's County, which had some residential and industrial development before the Beltway, fell somewhere in-between. Apartment construction and industrial development did not surge as it did in Fairfax, but did see a noticeable rise. "You can't attribute the surge in apartment building to the beltway," the president of the Suburban Maryland Builders Association said in 1966, "but it has certainly been a contributing factor. It has made certain areas in Prince George's County more suitable for development than others. And it has helped industry enormously."⁷⁸⁴ Some communities felt the push more strongly than others; former city manager Jim Giese explains that many proposals for retail development "that Greenbelt was bombarded with at that time was because the Beltway was coming. And all of the developers wanted to get in on it."⁷⁸⁵ The Beltway, Giese adds, literally helped build the town of Greenbelt:

⁷⁸² Martha Angle, "They Plan to Loop the Loop," Evening Star, 24 March 1966: B-3.

⁷⁸³ Ibid.; Angle, "City's Concrete Circle."

⁷⁸⁴ Angle, "City's Concrete Circle."

⁷⁸⁵ Interview with Jim Giese. See also James Giese, "Beltway Plaza is a Monument to Its Owner, Sidney Brown," Greenbelt News Review, 14 December 2000: 1.

The first relationship Greenbelt had with the Beltway was in construction. [City Director of Public Works] Buddy Attick became acquainted with the contractors doing the excavation work, roadwork for the Beltway. And they wanted a place to work on their construction equipment for maintenance. And the city had some old government metal warehouses at what is now the State Highway Administration property. That was owned by the city at the time and had been their sewage treatment plant until WSSC took the sewage and closed it down. . .

And so Buddy essentially worked out a deal where the contractor could have one of these sheds for his equipment maintenance, in return for which he would do some earth-moving for us. And what we had wanted done, the mayor at that time was very much interested in upgrading the end of the lake over on that end. And that area had silted in with dirt and the like, and had become swampy and kind of a shambles. And he wanted us to do something about it. Of course, we didn't have the money or the equipment to do it. So Buddy worked out a deal where this excavation person . . . came out with primarily [] one of these cranes, with what do they call it, a dragline, is actually what they used. . . . And with that, we made the peninsula that's now at that end of the lake. . .

And then they had leftover dirt. And we had some places that needed dirt. I think one that's directly related to the Beltway is below the dam. We have, for the lake, a concrete dam. And there's earth backfill, but it went straight down on the backside of the dam. And we got the contractor to bring in fill from the Beltway and fill that up and give us more area behind the dam. We filled up to an easement for the W[ashington] S[uburban] S[anitary] C[ommission] for a water main right-of-way. That's how we got the configuration there.⁷⁸⁶

The Beltway even spurred religious development: In a 1970 news release, the Federal Highway Administration announced that half of the 36 churches located within a half-mile of the Beltway had been built since the route was publicized in 1958. One church official interviewed noted that "the Beltway is fabulous. Membership has doubled since the Beltway was constructed." "The Beltway was the prime reason for location," another said. "It will help the church grow at a rapid rate."⁷⁸⁷ The location

⁷⁸⁶ Interview with Jim Giese.

⁷⁸⁷ Federal Highway Administration, "Beltway Churches Show Impact of Highways on Community Life," news release, 27 December 1970.

worked in terms of visibility; several pastors reported that motorists came into their churches for the first time after seeing the steeples from the Beltway. Between 1964 and 1969, the number of churches within five minutes of Beltway interchanges grew by 40 percent compared to 11 percent for the entire metropolitan area.⁷⁸⁸

Would all of these developments have taken place anyway? Sutton argues that ongoing suburban growth and expansion, not beltways themselves, are responsible for the development which occurs near the highways. But factors indicating that development was induced by the Beltway—which Sutton does not find in Denver—were present in the Washington area. A 1966 report published by developer James W. Rouse's firm pointed to the surge in apartment construction (especially in relatively undeveloped areas in Prince George's County) and specified that "many close-in apartment sites have been leap-frogged in favor of sites near the beltway." Industrial development, too,

was directly stimulated by the circumferential roadway and much of the activity might not have taken place at all if these new sites had not become available. In Fairfax County, more than one million square feet of industrial space were built in the past year, just a trace less than the total amount constructed during the previous four years. Virtually all the 1964 space was located in the beltway vicinity.⁷⁸⁹

There is no question that ongoing decentralization of the Washington area, in part for reasons given in Chapter 3, would eventually have reached the land surrounding the Capital Beltway. But the extent and types of development near the Beltway, and the contemporary observations from the first years of the highway by the people involved

⁷⁸⁸ Boldt, "Beltway: Planning Problem."

⁷⁸⁹ James W. Rouse & Company, The Beltways of Baltimore and Washington: Their Impact on Real Estate Activities (Baltimore: James W. Rouse & Company, 1966), n.p.

with creating and analyzing that development, suggest that the road itself was the cause for changes in land-use patterns and increased commercial, residential, and industrial growth in its proximity. In this way, it influenced the shape of the region's physical landscape, even as it entered into and reshaped social, political, and cultural discourse in ways discussed earlier in this chapter.

CHAPTER 10

"WHAT THE PAVE MEANT": COMING FULL CIRCLE⁷⁹⁰

[Y]ou can bash the Beltway as much as you want, but it's an extraordinarily valuable resource. We'd be dead without it. —Robert Grow, Greater Washington Board of Trade, 2001⁷⁹¹

"There is no other highway like the beltway in this country," writes an ex-trucker who has driven through 48 states.⁷⁹² "I think the beltway is a really distinctive road," adds a lifelong Washington area resident.⁷⁹³ In this dissertation, I have tried to provide a picture of what makes the Capital Beltway a "really distinctive road," while exploring the ways in which it operates as both a physical artifact and a social institution. In this final chapter, I review my findings with respect to the guiding questions I set out in the introduction. I then assess the usefulness of the methods I applied in this study, discuss the effectiveness of applying cultural landscape and odology study models in complementarity, and revisit the elements which distinguish my odology from others. I conclude with a brief discussion of where I believe further work can go from here, in terms of both method (research techniques) and content (the Beltway itself).

⁷⁹⁰ The first half of the chapter's title was suggested by Shelby Shapiro.

⁷⁹¹ Interview with Robert Grow.

⁷⁹² Beltway Survey #377.

⁷⁹³ Beltway Survey #342.

Summary: Significance of the Capital Beltway

In Chapter 1, I assembled a set of questions for grounding an odological study, and in Chapters 3 through 9 addressed each of them repeatedly. First, I asked, what beliefs and values does the Beltway reveal and create? As we have seen, it creates and reveals many different beliefs and values. From its inception, as I described in Chapter 4, the Beltway physically embodied the apocalyptic fears of the Cold War era in its earliest guise as a defense route. Further, that original version of the Beltway and its unnecessarily dangerous physical components spoke to the prevailing emphasis on traffic efficiency at the expense of safety, as I explained in Chapter 7; highway officials stung by public and political criticism and high injury rates gradually restructured the Beltway to make it a safer place. Elsewhere in Chapter 7, I noted that the Beltway's drivers may see the highway as a triumph over nature—drainage systems and other design elements lead drivers to believe they can negotiate the road under any conditions—but that engineers and maintenance workers know that ice, rain, and wildlife will never disappear entirely from the Beltway, and the best they can do is to minimize the danger those and other natural phenomena pose. In Chapter 9, I explained how the Beltway serves as a template for individuals and groups to promote an array of religious, political, and cultural beliefs and to register their critiques of a variety of social institutions, most prominently the federal apparatus heavily contained "inside the Beltway."⁷⁹⁴

⁷⁹⁴ The idea of registering critiques of social phenomena through seemingly unrelated means is discussed at length by Barry Glassner, who argues—controversially—that tenuous illnesses such as Gulf War Syndrome and multiple chemical sensitivity in part

Close attention to the planning process, which I included in Chapters 5 and 6, suggests that the Beltway highlights the precedence (in highway and political officials' view) of the Washington region over the region's smaller individual jurisdictions. Maryland officials in 1959 brushed off Cabin John residents' concerns and Virginia officials in 1999 did the same in Fairfax. In both cases officials argued that those communities' concerns were subsidiary to the transportation needs of the region and that the Beltway and its proposed improvements were necessary for the broader public interest. In addition, highway officials (by action) and motorists (by acquiescence) consider drivers to be more important than the people who live near the Beltway, seen in the minimal compensation offered to Isidore Elrich's family in 1960 and the minimal compensation which unhappy Virginia residents indicated in 1999 they expected to receive for the Beltway's negative impacts.

In my second question, I asked about what dynamics of power and access relate to the Beltway, who controls or has access to the road and its planning and alterations, and what implications and consequences result. I focused directly on these issues in Chapters 5 and 6, where I described how the Beltway's and other public hearings in the 1950s and 1960s were set up to put all important decisions into the hands of highway officials, who thus had no need to respect anyone else's priorities. Episodes like the ones experienced by Neal Potter, Paul Foer, and Isidore Elrich were the result, where individuals' personal lives and memories were shattered and drastically reshaped. In

exist because they permit the identification of deficiencies in specific social institutions. Gulf War Syndrome, for example, points to problems in the military system; multiple chemical sensitivity raises questions about the consumer products industry. See Glassner, *The Culture of Fear: Why Americans Are Afraid of the Wrong Things* (New York: Basic Books, 1999), 163.

examining the updated planning processes of the 1990s and beyond in Maryland and Virginia, I explained the ways in which both states have taken significant strides in sharing power and increasing access to the process, although Virginia still has further to go in providing what its residents consider meaningful access. My rhetorical analysis of a transportation planner's public speech provided a freeze-frame snapshot of the planning process, demonstrating the significant effect that officials' presentations and word selections have on the public's own sense of inclusion in the process.

From access to the planning process, I turned in Chapter 7 to access to the Beltway itself, and discussed how certain groups (cyclists, pedestrians, the "carless") are not only discouraged from using the highway but are legally prohibited from doing so. The Beltway, which is a public road and ostensibly a resource for all, is therefore in reality a resource limited to people who can fulfill the requirements for accessing a sanctioned motor vehicle for traveling on it. Finally, although officials from several jurisdictions hold authority over their respective portions of the Beltway, no central authority coordinates them. Other bodies have entered the fray to mediate and often to simultaneously push their own agendas; in Chapter 9, I explained how the media, the Metropolitan Washington Council of Governments, the Greater Washington Board of Trade and other "pro-highway" groups, and the Coalition for Smarter Growth and other "pro-transit" groups all attempt to influence decisions concerning the Beltway.

In my third question, I asked what assumptions or normativities the Beltway reflects and creates, and how it contributes to a social world which seems "normal." This process, I argued in Chapter 3, began with the Beltway's creation itself, replacing a fragmented and disjointed regional transportation network with direct connections

between both states and among the suburbs. After 1964, area residents found it natural to expect and take advantage of those efficient linkages; this mindset eventually superseded the earlier one in which the suburbs were considered to be spatially and socially far apart from one another, and Maryland and Virginia even more so (one respondent writes "Can you imagine the traffic in this area now without the Beltway?").⁷⁹⁵ In fact, the Beltway and other new highways were so successful in appealing to motorists that, as I described in "Pedersen's Paradox" in Chapter 6, they reinforce a sense that individuals must have acceptable access to quality roads which work well. This sense of entitlement to inexpensive (relative to Europe, for example) private automobile transportation is deeply ingrained, making it difficult not only for Maryland officials to generate strategies to dislodge it, but also—as Neil Pedersen explains—for anyone to even think seriously of alternative perspectives in the first place.

In Chapters 5 and 7, as mentioned above, I discussed how the Beltway helps create a reality in which the concerns of motorists are paramount and those of people living near the highway are secondary or even negligible. In Montgomery County, the Beltway goes through people's back yards with sound barriers and guardrails as compensation; this becomes an acceptable fact of life for the public, even if it is entirely unacceptable to the individuals who live within those yards. Also in Chapter 7, I explained how even though major expenditures on and ubiquitous media coverage of the Beltway create the impression that it is an integral part of and valuable resource in

⁷⁹⁵ Beltway Survey #521.

everyone's life, certain groups (the "carless") benefit far less than others, and in fact the highway is a significant impediment for cyclists and pedestrians.

In what ways, I asked in my fourth question, does the Beltway function as an arena of consensus and conflict, and of unity and division? Conflict and division played out in Chapters 5 and 6, where I looked at the tensions between Maryland and Virginia and between highway officials and residents. Also in Chapter 5, I dissected a number of overlapping conflicts in the case of the Beltway's "disappearing parkway" segment, particularly the tensions among a variety of agencies and political bodies and over the relative importance of highway construction versus natural resource protection. But Chapter 9 focused most directly on the Beltway's conflicts, including those between local and long-distance drivers, between motorists and truckers, between public and private space, and among motorists themselves. In addition, though I did not elaborate on it, I noted the tension between the two states and the District of Columbia, which controls part of the Wilson Bridge.

In Chapter 9, I explained that the Beltway also engenders unity both in terms of creating an increased geographic proximity for residents and in providing a framework of common experiences and language. Before the Beltway's construction, the Washington area was less cohesive as a distinct social unit; afterwards, a new sense of community developed. Demographer Alan Henrickson defines a community as

a territorially and socially differentiated group consciousness. . . . [T]he subjective reality of the place must be taken into consideration along with its objective contents and contexts. A 'place' is not only a site. Besides the physical-geographical, economic-geographical, and social-geographical settings that structure the Washington community, it is organized by the mental maps held by its inhabitants.⁷⁹⁶

⁷⁹⁶ Henrickson, "A Small, Cozy Town," 126.

The Beltway, I argued in Chapters 4, 8, and 9 with support from my respondents, restructured the mental maps held by area residents, and led them "to think of DC and its suburbs as a single metropolitan area," in the words of journalist Larry Van Dyne.⁷⁹⁷ At the same time, the Beltway and Metrorail system (opened 1976) together recast what Henrickson calls the physical-geographical setting of the community: Metro planners' and local officials' decision in 1967 to terminate most rail transit lines at or near the Beltway reinforced the Beltway's unofficial status as a boundary line for the core of the metropolitan community.⁷⁹⁸

In my fifth question, I asked how the Beltway is perceived and experienced by the individuals whose lives intertwine with it, how it has influenced their lives and identities, and how they have in turn influenced the road. To answer this question, I focused in depth on the relationships between members of different groups and the Beltway: its creators, in Chapter 4; its early neighbors, who incorporated it into their lives in Chapter 4 as a playground and racetrack and in Chapter 5 as an overpowering nuisance; its later neighbors and its supervisors, in Chapter 6; police, fire and rescue, and maintenance personnel in Chapter 7; and a wide range of survey respondents, in Chapters 8 and 9. I addressed the influence of the Beltway on individuals' lives most directly in Chapter 5, where I detailed the effects on selected neighbors, and in Chapter 8, where my respondents responded to the Beltway with a variety of strategies ranging from coping with its stress to leaving the Washington area entirely.

⁷⁹⁷ Van Dyne, "Getting There," 203.

⁷⁹⁸ Schrag, "Mapping Metro," 22.

I also observed how much power a single individual has to affect other people's lives. The instigator of the accident I watched transpire, in the episode described in Chapter 7, significantly influenced thousands of other drivers, and the few people in Virginia's Smart Traffic Center whom I watched manage the incident response similarly controlled how the rest of the afternoon would play out both for people already driving and others who were planning to. Members of the Chevy Chase Fire Department shared this observation. "One person can affect more people's lives by one action," Rick Blandford told me, "than you could ever do other than a terrorist attack. If you think about it. Take a car out here on a busy day around Christmas vacation, and flip it. And see how many lives you affect." "Not even that!" Timothy Bell said. "Take your truck out, park it on the shoulder, and turn the lights on. It would come to a standstill. Just throw the lights on, and walk and just go someplace else. Man, it would shut down. It would totally shut down."⁷⁹⁹

Finally, Washington area residents have contributed to and found a distinct personality in the Beltway. Roads do attain this type of special character, but as I explained in Chapter 1, it is usually the nostalgic highways (the National Road, Route 66) which garner popular and scholarly attention to explore that character. In this study, I have argued that the study of gritty and utilitarian roads also has much to offer, and that those roads too may develop distinct personalities. The following thoughts, offered by a Silver Spring resident, best articulate from among my respondents what constitutes the Beltway's intangible personality:

I want to share an idea I have told friends from time to time. It is a treat to

⁷⁹⁹ Interview with members of the Chevy Chase Fire Department.

register it with someone with a special interest in the belt. I grew up in rural CT where the roads had an entirely different "feel". People talked about them as if they had personalities, describing them with human terms like "sweet", "fun" and "relaxing", some even felt like old friends and we could often convince my Mom to change our route so we could take a road that made the trip more enjoyable. I would go for drives for the pure pleasure of spending time on them, kinda like going for that Sunday drive after church or dinner, but I preferred to take these jaunts at night.

If that were heaven, the belt is hell. I say this for a reason other than you might expect - not so much because the actual driving experience is usually aggravating. It is because the road has no soul. I know this sounds bizarre but the circular nature of the road deprives it of any real sense of direction. It has no origin or destination, it goes nowhere in particular, it belongs to no one and no one lives there. It is like an abstraction, it epitomizes frustration.

As a result people approach it only with impatience and utility. I think, as with people who share this characteristic, they are treated with a fundamental lack of respect and disregard - this permeates the experience of being there and that is partly why there is such antipathy for the road. People do not care for the belt like they might for other purely linear stretches of asphalt that create a distinct path on the earth. It is as if it does not have integrity - this leads to its functional detriment - it is like a host to parasites or a prostitute with johns. Who can get attached without being ambivalent and resenting its presence? Is anyone else expressing this sentiment or should I just go back to the country?⁸⁰⁰

Whether or not an inanimate artifact can be said to truly have a personality, this woman's explanation and others from respondents in Chapter 8 make clear that individuals' perceptions about the Beltway's character have important consequences. The Beltway informs a wide variety of the daily and long-term decisions and actions of many Washington-area residents, and plays a fundamental role in their ways of thinking about their lives and the world around them.

Taken together, the many kinds of significance which meet in and radiate out of the Beltway demonstrate that this utilitarian road, largely overlooked in scholarship and often reviled by its users, is one of the most important social, cultural, economic, and

⁸⁰⁰ Beltway Survey #481.

political figures in the greater Washington area. Residents of the region truly cannot conceive of a life or landscape without it. Beyond its meanings in a national context, understanding the Beltway is fundamental to understanding metropolitan Washington: without it, the region would be a drastically different place at all of the levels I have addressed.

Looking back and looking forward

To study the Beltway from what I have called an odological perspective, I introduced several experimental research methodologies, in addition to incorporating other already established techniques. In particular, in an attempt to codify a framework for the cultural study of roads (J.B. Jackson's odology), I developed a series of five guiding questions drawing from earlier scholarship on American highways; and in an effort to understand the Beltway's influence on and by individuals, I created and carried out a Web survey. The findings summarized in the first section of this chapter suggest that my application of both of those methods was fruitful; each served as a substantive tool in guiding my data collection and analysis of the Beltway's many types of significance.

I am particularly pleased with the Web survey: among other factors, it successfully drew a broader geographic range of informants than I could have reached in this context using a paper survey, and it brought to my attention individuals with deep and emotional connections to the Beltway whom I do not believe I could have located through other means. Certainly the cost factor is also a benefit of this research

method; using my academic institution's Website to host the survey, I was able to limit my financial costs to the paper and ink needed to print out the responses. I recognize a number of limitations inherent in Web surveys, and though I made purposeful attempts to compensate for them (as I described in Chapter 2), they did not disappear entirely. I especially regret the would-be respondents who did not have access to or knowledge for using the Internet, and those who were denied access because several newspapers misprinted the Internet address of the survey. Despite those limitations, and although neither I nor anyone else had much exposure to it before I initiated this project, I find that the rich benefits of the Web survey make it a valuable tool—when carefully and thoughtfully applied—for cultural landscape study, ethnography, and odology.

While the Web survey helped me reach out to informants I would have trouble locating using traditional ethnographic methods, my odology framework guided me in looking at the Beltway in ways other scholars had not done in their own studies of roads. Each of the five guiding questions was addressed in at least one of the works on highways which I introduced in Chapter 1, but none of those studies incorporated all of the questions. By consolidating them into a single analytical framework and a single study, I have tried to offer a new example for how others seeking to understand roads from American Studies and odological perspectives might progress. In addition, the type of rhetorical analysis I included in Chapter 6 does not appear in any of the published works on American highways. In that section, I focused at a very detailed level and on a very specific moment how the highway planning process operates; by writing from an ethnographic approach, I was able to depict and analyze the process as

it occurred, not retrospectively (and usually secondhand) as all other odologies have done.

To help in answering the five guiding odology questions, I drew heavily on a cultural landscape fieldwork model comprising five operations with multiple subheadings. I found that the cultural landscape and odology frameworks dovetailed effectively with each other. The fifth operation of the cultural landscape model, cultural analysis, included suggestions for approaching the issues raised in the first four odology questions (beliefs and values, power and access, assumptions and normativity, and conflict and consensus). The third cultural landscape operation, focusing on perceptions, complemented the last odology question which emphasized the same approach. The remaining three cultural landscape operations provided me with a framework for describing the highway, its boundaries, and the interactions between its components; doing so laid the groundwork for the type of analysis and synthesis demanded by the odology questions.

Earlier versions of my cultural landscape fieldwork model did not include issues of conflict, power and access, representation, identity politics, multisensory analysis, or sacred dimensions. Using the revised model in Appendix A for this study, I found that those issues—especially conflict, power and access, and representation—were critical to understanding the Beltway's significance and the ways it influences people's lives. Equally important was the model's emphasis on considering the importance of different kinds of landscape components, which encouraged me to think about the many ways in which the Beltway's people, objects, and non-human natural components interact. Over the course of the study, in fact, I found that every operation and subheading of the

fieldwork model could be applied substantively to the Beltway, although I gave more attention to certain issues than others. This type of interdisciplinary cultural landscape approach, I believe, could be similarly used equally effectively in the study of other roads as well.

In my study, I gave particular attention to power, access, and conflict (especially in Chapters 5 and 6), the interactions between components of the landscape (Chapters 4 and 7), perceptions of the landscape (Chapter 8), and cultural analysis (Chapter 9). Certain other topics from the cultural landscape framework received comparatively short shrift. Perhaps my weakest effort comes in the final operation under the heading of identity; although I raised issues of the Beltway with respect to class and race, I did so briefly, and hardly touched on other categories of identity. I also gave little attention to the sacred dimension of the Beltway landscape, beyond short discussions of the Brentwood Foursquare Church brochure and the Mormon Temple. There is clearly more work to be done regarding the Beltway from each of these perspectives.

Like the Beltway, this study is an incomplete and imperfect contribution which others will hopefully improve. Conspicuously absent from the study, for example, is substantive comparative analysis. Except for the beltway literature review at the end of Chapter 9, I did not place the Beltway in perspective with similar roads regionally, nationally, or internationally. For this case study, I consciously elected to downplay comparative analysis in order to focus on other issues; still, the cultural landscape model could benefit from a step emphasizing comparison and contrast, for use in the analysis of other sites. Further effort in this type of methodological sense is needed to strengthen both my odology and my cultural landscape study models. They will of

course need continuous attention and revising in the future in order to incorporate newly relevant issues.

From a content perspective, there is far more to say and learn about the Capital Beltway than I have included in this 450-page study. Roads are rich resources indeed. In the course of the previous nine chapters, I noted certain topics—the Wilson Bridge, the Springfield Mixing Bowl—which could easily take on full-length studies of their own (and have, though not yet by academics). In Chapters 5 and 9, I selected a few key conflicts to explore in detail, but there are many others: tensions in the 1970s over proposals to widen the Beltway in Kensington, and battles in the late 1990s and through 2001 over the proposed Metroland development on environmentally sensitive land adjacent to the Beltway and Greenbelt Metro station, are only the tip of the iceberg.⁸⁰¹

⁸⁰¹ On controversies in Kensington, see Martha Angle, "Beltway Brings Traffic and Trouble to Maryland Suburb," Evening Star, 22 March 1966: B-1; John McKelway, "Now They Want to Run the Beltway Past MY House," Evening Star, 17 February 1975: B-1; Roberta Wyper, "I-495 Plans Stir Debate," Montgomery County Sentinel, 20 February 1975: A-1; Barbara Palmer, "215 Md. Homes Saved as Beltway Plan Dies," Evening Star, 20 February 1975: B-1; Joe Green and J.Y. Smith, "Beltway Shift in Kensington is Called Off," Washington Post, 20 February 1975: E1; Sonia Boin, "Connecticut Residents Fight Park Beltway Reconstruction," Suburban Record, 19 March 1976: 1; Leon Dash, "Widening of Beltway Opposed by Neighbors," Washington Post, 16 March 1976: A16; Genie Koliou, "Beltway Widening Protested by 400," Montgomery Journal, 18 March 1976: A-1; "Decongesting the Maryland Beltway," Washington Post, 3 June 1976: Maryland Weekly, 7; Paul Hodge, "Beltway Exit on Kensington Parkway to Close," Washington Post, 21 August 1980: Maryland Weekly, 10.

On the Greenbelt Metroland controversy, see Virginia Beauchamp, "SMA and SHA Each Discuss Beltway Access to Metroland," Greenbelt News Review, 30 September 1999: 1; Jackie Spinner, "\$1 Billion Greenbelt Project Founders," Washington Post, 20 December 1999: B1; Virginia Beauchamp, "History of a Planning Process," Greenbelt News Review, 3 February 2000: 1; Virginia Beauchamp, "Public Participation Process Generates Issues and Concerns," Greenbelt News Review, 17 February 2000: 1; Virginia Beauchamp, "Greenbelt Station Development Finds Beltway Access Crucial," Greenbelt News Review, 24 February 2000: 1; Virginia Beauchamp, "Developer

Nor, as mentioned above, did I offer any international context for the Capital Beltway; beyond the extensive 1980 Payne-Maxie study of American beltways, there is little comparative research yet published on beltways either nationally or internationally.

However, as I indicated in Chapter 1, none of this was of much interest to my survey respondents themselves. For some of them, my study prompted one question and one question only: how can the terrible traffic situation on the Beltway be improved? My survey told respondents explicitly what this project was about—namely, not finding traffic solutions—yet I still received comments along the lines of "I hope your study will provide insight on how to improve the traffic," "hopefully you will have some input on making it flow smoother," and "I hope you can generate some interest/solutions about how to improve the Beltway."⁸⁰² To these respondents, I sent personal email messages expressing my appreciation for their encouragement, but apologizing that my project had a different set of goals. It did, at the outset. But heeding the issues which clearly were of paramount concern to my informants, I attempted to develop my own solutions for ameliorating Beltway traffic based on what I learned during the course of this study, after accounting for the odological questions I had set out to answer. What I learned surprised me; I conclude (probably to the disappointment of my respondents) that Beltway traffic problems are not solvable by any conventional means. There are several reasons for this, as described below.

Proposes State Buy Sensitive Lands," Greenbelt News Review, 2 March 2000: 12; and Virginia Beauchamp, "Council Agrees to Meeting With State on Land Buy," Greenbelt News Review, 1 February 2001: 1.

⁸⁰² Beltway Surveys #589, 488, 325.

In the first two novels of his popular Foundation series, the science fiction writer Isaac Asimov describes how psychologist Hari Seldon perfects the field of psychohistory, in which scholars use algorithms representing typical social behaviors to predict social, political, and economic history far into the future. As his civilization prepares to fall, Seldon calculates the most likely course of events stretching for hundreds of years, and prerecords a number of videotaped speeches to be released for viewing at irregular intervals in the centuries to come. Each speech includes a brief summary of what events have recently transpired (according to his predictions) and suggestions about what his viewers can do to prepare for upcoming events. For the first few hundred years, social events across the universe play out along Seldon's predictions; however, a single unexpected factor Seldon could not have predicted (a mutant) then disrupts what he had projected would happen, and from that time forward his assumptions and predictions diverge further and further from reality.⁸⁰³

In a transportation context, planners take the place of Asimov's psychohistorians, and planning and political officials join together in the role of Hari Seldon. They plan for the future using everything they know about the past and the present, but like Seldon, cannot usually account for phenomena which have never before existed at the time they develop their plans. And in the case of the Beltway, the planners' predictions at the key time—the 1950s and 1960s, when the road was designed—turned out to be so wildly inaccurate that it is hard to imagine later generations of officials being able to compensate for their errors.

⁸⁰³ Isaac Asimov, Foundation (New York: Gnome Press, 1951); Isaac Asimov, Foundation and Empire (New York: Gnome Press, 1952).

Here is why. In Maryland, the State Roads Commission estimated in 1964 that 55,000 vehicles per day would use the state's portion of the Beltway. Still, it prepared for the future by designing the road to handle 100,000 vehicles per day, with plans to widen from six to eight lanes by 1970 and increase capacity to 140,000 vehicles per day. The original figure—55,000—was exceeded in the Beltway's first year of operation.⁸⁰⁴ Virginia's predictions were even lower, at 49,000 vehicles per day; its original section of the Beltway had capacities of 50,000 (four-lane portion) and 75,000 (six-lane portion).⁸⁰⁵ As in Maryland, Virginia's high estimate of 49,000 vehicles per day was exceeded in the first year of operation.

So in both states, Beltway ridership rose past initial estimates almost immediately. But the key is in the numbers themselves: Virginia expected 49,000 vehicles per day and Maryland 55,000 per day, with gradual increases. Yet by the turn of the century, the entire Beltway carried approximately one million vehicles per day.⁸⁰⁶ There is simply no way that a single highway can absorb ten times its original expected volume of vehicle load without extremely significant changes in travel patterns, modal switches (e.g., a massive shift to mass transit) or physical infrastructure. To adequately carry the current volume given the state of the rest of the current regional transportation infrastructure, the original planners would have had to design a highway with probably quintuple the current number of lanes. Certainly contemporary officials cannot add that

⁸⁰⁴ Feaver, "Washington's Main Drag;" Angle, "Road Built as D.C. Bypass."

⁸⁰⁵ Angle, "Road Built as D.C. Bypass;" Jane Seaberry, "Va. Beltway Widening: Tardy, Costly," Washington Post, 26 November 1976: A1; Hudgins, "Va. Widening of Beltway."

⁸⁰⁶ Feaver, "Washington's Main Drag."

many lanes. But without them, it is unlikely that the Beltway by itself can ever be "solved."

What went so wrong? For the Beltway, what played the role of Hari Seldon's mutant and disrupted planners' original expectations? Journalist David Boldt answered the question in 1972: "the central reason for the daily jams [on the Beltway] is the inability in the early 1950s to forecast the major shifts to suburban living, the maturing dependence on the automobile, and the effect the Beltway would have on itself."⁸⁰⁷ The congestion and eventual lack of adequate lanes resulted from a drastic underestimation of what would happen to Washington's suburbs and how drivers' patterns would shift to become far more inter-suburban than before. In another example of oversight, the National Capital Planning Commission predicted in 1952 that the percentage of the region's population living in Washington's suburbs would rise from 40 percent to 50 percent by 1980. But by 1970, the suburbs' share was already 74 percent.⁸⁰⁸ As a result, the Beltway was planned to serve a distinctly different suburban community and distinctly different travel patterns than actually came to pass. M-NCPPC planners recognized by December 1964, just four months after the Beltway opened, that its unexpected effects on development had likely already invalidated growth plans developed by the commission less than a year earlier and had weakened or nullified prospects for the wedges and corridors plan.⁸⁰⁹

⁸⁰⁷ Boldt, "Beltway: Planning Problem."

⁸⁰⁸ Ibid.

⁸⁰⁹ Peter S. Diggins, "Plan for Suburbs Feared Outdated by Beltway Growth," Washington Post, 17 December 1964: C6.

The planners and engineers I spoke with confirmed that faulty predictions had made traffic solutions difficult. Jack Hodge, who worked for the Virginia Department of Highways during early stages of the Beltway's development, recalled that "when the Capital Beltway was planned, initially, the planning people in Fairfax County felt that all of the development would stay inside of the Beltway. Well, obviously they didn't figure exactly right."⁸¹⁰ But making correct predictions would not necessarily have meant that Virginia would have built a road appropriate for 2001; after all, state officials felt silly even building a four-line highway through rural farmland. Hodge explains:

I don't think that one can say that states do not plan far enough in the future. They can. Two things. If you build what is really truly needed, it looks as if you wasted money because there's lanes of pavement there that's not gonna be used for a period of time. Then you have spent money that you have badly needed somewhere else. So I guess, it's how much can you afford to spend. And in Virginia's case, on a 55,000 mile system? Of all the roads, of course, not just the Interstates. I guess that's where you have to look at it. And you always have those engineers that are doers, and build what they gotta build, and then you have those planners, and somewhere between the two, the twain have to meet.⁸¹¹

Subsequent projections also missed the mark: Maryland State Highway Administration's Neil Pedersen remembered developing traffic forecasts for the year 2005 back in 1980, when the Beltway had traffic volumes of about 120,000 vehicles per day on the Maryland portion. "We were saying 160,000 vehicles in the year 2005. Well, here we are in the year 2001, and the year 2000 counts . . . are pushing 250,000. So we kind of undershot our forecast, to say the least."⁸¹² Maryland's planners, Pedersen

⁸¹⁰ Interview with Jack Hodge.

⁸¹¹ Ibid.

⁸¹² Interview with Neil Pedersen.

explained, assumed that the long-planned Outer Beltway or Intercounty Connector would be built and that high-tech development along the I-270 corridor would not suddenly skyrocket. Once both assumptions and others proved wrong, the planners' predicted future, like Hari Seldon's, veered far off-course with little hope of returning.

Conditions on the Beltway were exacerbated because other transportation facilities, which might have helped to alleviate its traffic more than they eventually did, fell victim to the same faulty projections, while still others, including the inner-Beltway portion of I-95, were not built at all. Architect John Corley, who helped design the Metrorail system from 1974 to 1999 (the first segment opened in 1976), acknowledged in 2001 that "[t]he original plans for Metro saw the predominant ridership as workers coming from homes to jobs. The jobs were downtown, and residences radiated in all directions from downtown."⁸¹³ But this pattern did not hold into the Beltway era, as Larry Van Dyne explains:

[Metro] was designed as a "radial system" to move people back and forth between downtown and the suburbs—"a perfect system for the city of 1910," as one highway advocate caustically puts it. And while it helped revitalize downtown DC and was terrific for people who worked there, it did little to serve the new breed of commuter who had to travel across the suburbs to get to and from work.⁸¹⁴

While Metro does not serve the suburbs as efficiently as it might if planners had had a crystal ball, hundreds of miles of highways proposed in the 1950s and 1960s never appeared at all. When planners and politicians cancelled plans for the four phantom

⁸¹³ Qtd. in Nina Mitchell, "The Hole Story," Washington City Paper, 7 September 2001: 17.

⁸¹⁴ Van Dyne, "Getting There," 207.

beltways introduced in Chapter 3, the Northeast and North Central Freeways, the Northern Parkway and Southeastern Expressway, and other highways in and around Washington, they relegated existing and future traffic to a transportation infrastructure significantly smaller than they had earlier anticipated.

Thus, by the time Metro and the Capital Beltway opened, the planners' assumptions underlying them were already erroneous. From all of these observations, I conclude that because a few additional highway lanes cannot realistically compensate for the enormous shortcomings in planners' projections from the 1950s, and because increased transit is not a satisfactory solution for reasons explained by Pedersen in Chapter 6, the only viable action for significant improvement on the Beltway is the manipulation of external factors, as per my discussion of Pedersen's Paradox. I do not see a meaningfully effective alternative. I acknowledge that construction of "missing" facilities, such as the Intercounty Connector (ICC), would likely improve traffic for certain areas. However, I noted in Chapter 6 that even the SHA's extensive 1994 study of the ICC concluded that construction of that highway would not significantly improve traffic conditions on the Capital Beltway. Apart from manipulation of external factors, only a massive expansion of the area's transportation infrastructure, of highways and mass transit, could do that, and such an addition is neither financially, politically, nor environmentally viable.

Yet at least the Beltway, with all of its deficiencies, was built. Its inadequate carrying capacity, its displacement of residents along its right-of-way, its adverse effects on its abutters, and its encroachment on parkland are to a large extent products of their time, which is to say pre-1969 when the policies described at the end of Chapter

5 went into effect. Had Maryland and Virginia attempted to build the Beltway after that year, when suburban patterns and traffic projections might have been clearer to planners to engineers, the more stringent social and environmental regulations would have guarded against these deficiencies—but the enhanced sensitivity and awareness of these concerns, underlying the 1969 policies, would quite possibly have prevented the road from being built at all. The Outer Beltway experienced that exact fate.

Washington's Main Street, which unifies the metropolitan region even as it is fraught with conflicts, thus had its best chance for becoming a reality within a short window of time: before 1952, there was little impetus to circumscribe Washington's suburbs; after 1969, it might have proved too difficult to insert a superhighway into densely inhabited middle-class suburban neighborhoods and through carefully protected parkland. "I can't picture the Beltway being put in today," I remarked to Slade Caltrider, who oversaw its construction in Maryland as an assistant district engineer for the State Roads Commission and later became the State Highway Administrator. With finality, he answered, "It could never be built."⁸¹⁵

⁸¹⁵ Interview with Slade Caltrider.

APPENDIX A

CULTURAL LANDSCAPE ANALYSIS FIELDWORK MODEL

The American landscape, at its heart, is an agglomeration of things, both animate and inanimate. Several scholars working along the lines of material culture studies—that is, the analysis of the relationship between objects and people—have outlined sets of operations for artifact study.⁸¹⁶ Each of their models has been geared toward individual objects. But study models which consider broader cultural landscapes--incorporating but not limited to individual items--have been lacking, despite the general consensus that cultural landscapes are a manifestation of material culture, or "material culture writ large."⁸¹⁷ In this discussion, I clarify the concept of the oft-used "cultural landscape" designation, argue that artifact analysis models are insufficient for broader landscapes, and propose a series of operations which consider issues specific to landscapes as well as those basic to general material culture study.

What, then, are cultural landscapes? The term appears regularly in scholarly and popular literature, but is seldom defined with accuracy. The concept of cultural landscapes overlaps material culture, anthropology, archaeology, cultural geography, and not a few other disciplines. In essence, cultural landscapes add a dimension to the

⁸¹⁶ For example, see E.M. Fleming, "Artifact Study: A Proposed Model," *Winterthur Portfolio* 9 (1974): 153-173; Jules David Prown, "Mind in Matter: An Introduction to Material Culture Theory and Method," in *Material Life in America, 1600-1840*, ed. Robert Blair St. George (Boston: Northeastern University Press, 1988), 17-34; and Charles F. Montgomery, "The Connoisseurship of Artifacts," in *Material Culture Studies in America*, ed. Thomas J. Schlereth (Nashville: American Association for State and Local History, 1982), 143-152.

⁸¹⁷ Prown, "Mind in Matter," 27.

study of individual artifacts. Material culture study, at its basic level, explores the dynamic relationship between human beings and material objects, in order to understand the beliefs, values, and conventions of those people who created, maintained, or altered those objects. Central to this definition is the dynamic and reciprocal relationship between humans and artifacts: both persons and objects are given agency, as each influences and is influenced by the other; artifacts are not simply considered to be passive, mute manifestations of humans' cultural patterns.

Cultural landscape study takes the two agents from material culture--humans and artifacts--and adds a third agent, nature, thus creating a three-way relationship. Merging the anthropocentric "culture" with the nature-bound "landscape," and invoking material culture's emphasis on the dynamic relationships between humans and artifacts, creates the interdisciplinary cultural landscape approach.

Still, no singular definition has gained hold in the field. Geographer Carl Sauer introduced the term "cultural landscape" in his 1925 essay, "The Morphology of Landscape," to indicate the result of active human influence on a natural site.⁸¹⁸ However, Sauer recognized only the human influence on a landscape, writing explicitly that "we waive the claim for the measurement of environmental influences."⁸¹⁹ This restriction eliminates any possibility of a reciprocal relationship between humans and nature. Furthermore, Sauer focused on the physical content of human effects on the land (e.g., climate change, terrain change), not on the beliefs and values underlying those

⁸¹⁸ Carl O. Sauer, "The Morphology of Landscape" [1925], in Land and Life: A Selection from the Writings of Carl Ortwin Sauer, ed. John Leighly (Berkeley: University of California Press, 1963), 315-350.

⁸¹⁹ Ibid., 342.

changes. Sauer's quantitative approach and one-sided process leave his original conception unsuitable for a more comprehensive analysis which does recognize a dynamic relationship between artifacts and nature.

More recently, Dell Upton has offered an insightful abstract view, explaining cultural landscapes as "the fusion of the physical with the imaginative structures that all inhabitants of the landscape use in constructing and construing it."⁸²⁰ The landscape can thus be considered the fusion of physical and social constructions of reality. Again, though, the explanation avoids attention to the power of those physical structures.

An alternative, somewhat more comprehensive definition considers the cultural landscape to be a cumulative record of the work of humans and nature in a certain place, as shown first, by tangible and intangible evidence which reflect the beliefs and values of the peoples in that place at different times, and second, by the reciprocal effect that the people of that site and its artifactual and natural components had on one another. In short, with cultural landscapes, the two-way dialogue expands to a triangular relationship by adding nature's agency, requiring study of the reciprocal effects which the humans, artifacts, and natural components of any site have on each other.

This framework may appear problematic in that it separates humans from nature, which seems to make it inapplicable to cultures in which humans are considered to be integral components of a natural cosmos. Furthermore, geographers Peirce Lewis and Michael Conzen have argued with justification that virtually all natural components of the planet have been affected to some extent by humans, and that therefore every

⁸²⁰ Dell Upton, "Architectural History or Landscape History?" Journal of Architectural Education 44 (1991): 198.

landscape is a cultural landscape.⁸²¹ Though it may be fallacious to insist that any site is entirely unaffected by human activity, for purposes of clarity my terms remain "human"; "artifact", signifying landscape features designed intentionally and purposefully by humans; and "nature." This separation recognizes the unique power which humans hold to alter the natural world and the inherent power of natural processes—including storms, earthquakes, climate changes, and so on—to influence people's lives.

For purposes of this study model, the term "nature" is used to denote what might be more accurately called the non-human natural environment. What we refer to as "nature," in everyday speech, is in reality a cultural construct, a conception of an autonomous world framed by our cultural systems, so nature becomes a lens through which we view and interact with a non-human environment. It is important to recognize that there does exist a natural world outside of our conceptions of it, even if "we can never know nature at first hand" without viewing through our cultural lenses.⁸²² Anne Whiston Spirn clarifies the tension between nature (the non-human world) and nature (people's conception of that world):

To deny the dynamic reality of the nonhuman world is . . . misleading and potentially destructive. Rain, rivers, mountains, trees, and birds are not just figments of human imagination; they exist. . . [T]hey . . . have an existence outside that which we grant them. Failure to appreciate the dynamic, autonomous role of nonhuman features and phenomena promotes the illusion that humans can construct and control everything. . . . There is always a tension

⁸²¹ Peirce Lewis, "Axioms for Reading the Landscape: Some Guides to the American Scene," in The Interpretation of Ordinary Landscapes: Geographical Essays, ed. D.W. Meinig (New York: Oxford University Press, 1979), 12; Michael P. Conzen, The Making of the American Landscape (Boston: Unwin Hyman, 1990), 2.

⁸²² William Cronon, "The Uses of Environmental History," Environmental History Review 17 (Fall 1993): 15.

in landscape between the reality and autonomy of the nonhuman and its cultural construction.⁸²³

Michael Barbour adds that "nature is real, of course, but we can experience and relate to others only a filtered, personalized version of nature."⁸²⁴

In this study model, it is Barbour's "real" version of unfiltered nature which the term "nature" is used to indicate. The steps of the model suggest ways for evaluating how humans apply their own social frameworks to turn that nature into personalized cultural constructions. While in general usage, therefore, "nature" actually denotes a culturally constructed version of the non-human natural environment, the remainder of this discussion for semantic ease uses the terms "nature" and "natural" to mean "non-human natural environment" and "related to the non-human natural environment," unless explicitly noted otherwise.

Artifact study models do not meet the challenge of addressing the key elements of cultural landscapes as construed above, particularly considerations of nature's role. The basic operations in the models, such as Jules Prown's description, deduction, and speculation and E. M. Fleming's identification, evaluation, cultural analysis, and interpretation may indeed be useful in landscape analysis.⁸²⁵ But they do not address particular issues which are significant to broader landscape interpretation. Considerations of spatial perception or nature's agency, for example, do not enter into these models.

⁸²³ Anne Whiston Spirn, "Constructing Nature: The Legacy of Frederick Law Olmsted," in *Uncommon Ground*, ed. William Cronon (New York: W.W. Norton, 1995), 112-113.

⁸²⁴ "Toward a Conclusion," in *Uncommon Ground*, ed. William Cronon (New York: W.W. Norton, 1995), 457.

⁸²⁵ Prown, "Mind in Matter," 24-26; Fleming, 167-173.

This is not to suggest that landscape study models are altogether absent. Cultural geographers Peirce Lewis, Donald Meinig, and Christopher Salter have offered guidelines specifically for landscape analysis. Lewis has been the more comprehensive, outlining the components of cultural landscapes: physical environment, perception of the landscape, ambitions for altering it, cultural strictures, and tools and technology used to shape the landscape.⁸²⁶ Elsewhere, Lewis has listed a set of axioms and other suggestions for use in landscape study.⁸²⁷ But Lewis's and the others' guidelines are more suggestive hints than they are step-by-step models of operations to carry out.⁸²⁸ More importantly, their models are grounded in 1970s cultural geography and do not account for more recent themes in cultural study such as power and access dynamics, contests of meaning, and issues of identity. Their hints, therefore, would be more effective if they were placed into a more systematic, comprehensive model of landscape evaluation which is more consistent with contemporary scholarship.

The study model I suggest here is composed of five operations, some of which have multiple subheadings (Table 1). These steps are description of dimensions, boundary identification, perception analysis, consideration of the dynamic relationship among the three components of the cultural landscape, and cultural analysis.

⁸²⁶ Peirce Lewis, "Learning From Looking: Geographic and Other Writing about the American Cultural Landscape," American Quarterly 35 (1983): 242-261.

⁸²⁷ Lewis, "Axioms"; Peirce Lewis, "The Monument and the Bungalow," Geographical Review 88 (1998): 507-527.

⁸²⁸ See Christopher L. Salter, "Cultural Geography as Discovery," in Re-Reading Cultural Geography, ed. Kenneth E. Foote, Peter J. Hugill, Kent Mathewson, and Jonathan M. Smith (Austin: University of Texas Press, 1994), 429-436.

Table 1.---Cultural Landscape Fieldwork Model (2002 revision)

<u>Operation</u>	<u>Sub-operation</u>
1. Description of dimensions	a. Physical 1) Humans 2) Artifacts, and/or 3) Non-human natural components b. Multisensory c. Spiritual/sacred
2. Boundaries	a. Set in time and space b. Creators and alterers identified c. Experiential vs. abstract (if applicable) d. Social vs. political (if applicable)
3. Perceptions	a. Identify b. Aesthetics c. Cognitive landscapes d. Language and terminology e. Spatial relationships
4. Dynamic relationship	a. Humans as agents b. Nature as agent c. Artifacts as agents
5. Cultural analysis	a. Cultural context & significance evaluated b. Power and access dynamics 1) Competing meanings 2) Images and representation c. Identity analysis d. Absent components e. Variable survivability (if applicable) f. Technology g. Role of the researcher

The first operation is a descriptive phase, similar to those in Prown's and Fleming's artifact analysis models but expanded to allow for landscape elements.⁸²⁹

This process defines the cultural landscape in several dimensions, introducing to the

⁸²⁹ Prown, "Mind in Matter," 24; Fleming, 156.

researcher a variety of complementary ways to think about the landscape's composition. The first dimension, the cultural landscape's physicality, defines the site in terms of its three basic elements, namely its humans, its artifacts, and its natural components. These distinctions relate landscape analysis to material culture study: these three categories correspond directly to the three principal subjects of material culture study, which Prown has defined as things made by humans, natural objects modified by humans, and unmodified natural objects.⁸³⁰

This portion of the operation, consistent with Fleming's identification step for artifacts, can similarly "be simple and brief . . . or it can be extended and detailed."⁸³¹ The choice will depend in large part on the size of the landscape (spatially and/or temporally), the information available to the analyst, the capabilities of the individual researcher, and the goals of the study. Though the idea of a cultural landscape is an interdisciplinary concept, few scholars have the background necessary to describe (let alone analyze) in minute detail each of the human, non-human natural, and artifactual sides of a given landscape. Still, all three elements deserve some description regardless of the analyst's particular expertise.

The basic purpose of this operation, again following Fleming, is to answer "the question, What is it?"⁸³² Suggestions for describing individual objects appear in the

⁸³⁰ Jules David Prown, "The Truth of Material Culture: Fact or Fiction?" in History From Things: Essays on Material Culture, ed. Steven Lubar and W. David Kingery (Washington: Smithsonian Institution Press, 1993), 2.

⁸³¹ Fleming, 156.

⁸³² Ibid.

artifact study models and will not be repeated here.⁸³³ Describing the human contributors to a cultural landscape is a separate issue. Questions here can focus on the individuals or groups whose physical presence coincided with the physical space of the landscape within a set time period, and/or on those persons who directly affected the physical or conceptual composition of the landscape during that period. Who was responsible for designing the elements of the landscape, for creating them, for maintaining them, for changing them? Who lived, died, worked, played, socialized, or otherwise participated within the landscape?

Further, the individuals associated with a landscape may or may not actually occupy its physical space. Midwestern power plant owners, for example, could be considered part of the New Hampshire cultural landscape, because emissions from those plants increase air pollution and decrease mountain views in northern New England. Similarly, western ranchers frequently consider federal land policies to be intrusive, but it is still those policymakers thousands of miles away who are partially responsible for the ways in which those landscapes are developed and used. A cultural landscape's people, therefore, can be generally divided into categories of individuals outside the physical boundaries of the landscape who nonetheless exert significant influence on it, and those present within the landscape itself.

Identification of the natural components of a landscape similarly offers an answer to "What is it?" While the researcher with scientific training will be able to go into more detail here, it should always be possible to outline a general picture of a site's vegetation, temperature, organisms beyond humans, climate, and the like. Because all

⁸³³ See Fleming, 156-7; Prown, "Mind in Matter;" and Montgomery, 145-52.

natural phenomena may be considered to be affected by humans in some way, the analyst may choose to combine this sub-operation with description of the landscape's artifacts (hence the "and/or" in Table 1). The objective of this first operation is not to write a cultural history of the individuals involved, nor to script a natural history of the site, but to provide an introductory sense of the components that contribute to the landscape's identity.

These components are not strictly visual in character. Americanist John Kouwenhoven writes:

We [must] not overlook the importance of what might be called sensory thinking. . . . Just as there are sight-thoughts, there are also feel-thoughts, smell-thoughts, taste-thoughts, and sound-thoughts. Our primary allegiance, as sentient creatures, is surely not to the creations of our verbal ingenuity, but to the particular sights, tastes, feels, sounds, and smells that constitute the American world we are trying to discover.⁸³⁴

Cultural landscape analysis, by extension, can and should be, when possible, a multisensory endeavor; this is the descriptive operation's second suggested dimension of landscapes. But most contemporary scholarship in the field prompts the researcher to go out and simply look. The decorative arts artifact study models cited earlier allow a little touching while preparing to describe the objects within the culture landscape under study, but otherwise, cultural landscapes seem to be for eyes only.

That is a shame. But not a surprise, according to J. Douglas Porteous's theoretical text on multisensory landscape analysis. "When we consider landscape," Porteous writes, "we are almost always concerned with a visual construct. . . . While visual landscapes have been analysed to death, non-visual sensory modes have been

⁸³⁴ John A. Kouwenhoven, "American Studies: Words or Things?" Reprinted in Material Culture Studies in America, ed. Thomas J. Schlereth (Nashville: American Association for State and Local History, 1980), 90-92.

paid little attention in studies of 'landscape appreciation.'"⁸³⁵ Few scholars have analyzed landscapes as soundscape, and almost none have attacked the smellscape or touchscape (Porteous's terms).⁸³⁶

Yet skin is the body's largest sensory organ, and tactile sense almost always remains even after other senses have deteriorated. Smell, too, gives useful information about an individual's surroundings. Non-visual senses in general are more proximate, helping to negotiate life immediately around the body; they are also more emotional and less intellectual, tied closer to pleasure and well-being. Cultural landscape analysis need not confine itself to only one sense.⁸³⁷

Multisensory landscapes are more serious a concept than they may appear at first. At the turn of the new century, soundscapes, for example, are no longer an obscure and abstract concept, if they ever were. Even in 1990, Porteous wrote that sound had become a major planning and industrial issue.⁸³⁸ More recently, a journalist writes, "National Park Service officials say the rising din of mechanical noise in natural areas has made them realize they must manage the parks not only for sights, but for the sounds, as well." NPS staff have drafted "soundscape preservation" policies to guide

⁸³⁵ J. Douglas Porteous, Landscapes of the Mind: Worlds of Sense and Metaphor (Toronto: University of Toronto Press, 1990), 22.

⁸³⁶ Porteous offers a sample framework for interpreting smellscapes, and cites the Viking Museum in York, England, as a pioneer in historic smellscape interpretation, in an exhibit where it recreates tenth-century Jorvik smells such as fish, leather, and earth (22-35, 45). For soundscapes, the classic reference is R. Murray Schaefer, The Tuning of the World (Toronto: McClelland and Stewart, 1977).

⁸³⁷ Porteous, 6-7; Edward T. Hall, The Hidden Dimension (Garden City, N.Y.: Doubleday, 1969), 39-59.

⁸³⁸ Porteous, 62-65.

unit administrators in managing and reducing unwanted sounds. A recent draft prompts administrators to monitor sound levels within their units and encourages the restoration of "degraded soundscapes," a step raising the question of when a landscape can be considered to be in a "natural" condition, if ever.⁸³⁹

Cultural and historical scholars are beginning to pick up the lead. For example, Jo Tacchi's ongoing research explores how radio sound "creates a textured 'soundscape' in the home, within which people move around and live their daily lives."⁸⁴⁰ The commercial world, especially stores, shopping malls, and theme parks, very deliberately manipulates all senses to create "atmospheric" conditions, in Douglas Rushkoff's phrasing, which maximize the potential for consumer spending.⁸⁴¹

In her analysis of the Sea World parks, Susan G. Davis provides an excellent example of multisensory cultural landscape analysis. Sea World administrators, Davis argues, carefully construct an experience promoting consumer spending and intentionally create a comfortable conception of nature which contributes toward that end. For example, the soundscape is characterized by omnipresent music which creates relaxation and deflects annoyance. Tactile emphasis--the touchscape--encourages participatory involvement and the opportunity to interact directly with park spaces, through judicious placement of animal petting pools and barrier rails. Even the

⁸³⁹ David Foster, "Amid Holiday Buzz, Parks Asking for Quiet: A Move Toward 'Soundscape' Preservation to Offset Mechanical Din," Boston Globe, 3 July 1999.

⁸⁴⁰ Jo Tacchi, "Radio Texture: Between Self and Others," in Material Cultures: Why Some Things Matter, ed. Daniel Miller (Chicago: University of Chicago Press, 1998), 26.

⁸⁴¹ Douglas Rushkoff, Coercion: Why We Listen to What 'They' Say (New York: Riverhead, 1999), 89-101.

tastescape plays into the parks' construction: the food offered, which accounts for 25% of Sea World's revenues, is both functional and celebratory, so that customers will leave with a good taste both figuratively and literally.⁸⁴²

Davis's study is significantly enriched by her use of a multisensory perspective. Analysis of other sites can benefit as well from a similar approach. However, specific guidelines for interpreting cultural landscapes as soundscapes, smellscapes, tastescapes, and touchscapes are still lacking (and perhaps this will encourage a reader to propose a set). Porteous courageously struggles to outline a working vocabulary and analysis framework for soundscapes and smellscapes, but both his terms and his techniques are unwieldy.⁸⁴³ For the time being, case studies such as Davis's are the best models for effectively incorporating a multisensory approach into what has traditionally been visually-privileged cultural landscape analysis. Even if a formal study apparatus is not available, researchers can still remember that the people, the objects, and the natural elements they analyze have more character than their visual appearance.

The third dimension for defining cultural landscapes focuses on their sacred or spiritual character. In Western societies, analysis within the natural and social sciences has generally shied away from consideration of the spiritual, particularly because the topic is subjective and difficult to quantify. However, issues of sacredness do inform the relationships between humans, nature, and objects, and need not be ignored even if they do not fit easily into Western analytical frameworks. Western academics may have particular difficulty examining cultural landscapes from this unfamiliar perspective, and

⁸⁴² Susan G. Davis, *Spectacular Nature: Corporate Culture and the Sea World Experience* (Berkeley: University of Berkeley Press, 1997), 93-94, 103-105, 111-112.

⁸⁴³ Porteous, 22-65.

may find many types of sites devoid of any spiritual connotation; still, it is important to have a framework at hand for assistance in studying sites which are not devoid and where issues of the sacred do inform the relationships between people, objects, and nature. Belden Lane has suggested four approaches for identifying and analyzing landscapes through a spiritual lens; those strategies can be applied in this first operation to define the sacred composition of a site and again in the fifth operation to analyze its significance.

The ritual approach, Lane explains, distinguishes between landscapes as "topos" and "chora." Topos sites are inert and do not exert spiritual influence on creatures or objects within the site's boundaries, while chora sites are spiritually enhanced with a common bond linking all elements of the landscape; purposeful ritual activity within the landscape allows people there to experience it as chora rather than topos. The ontological approach, introduced by Mircea Eliade, differentiates between sacred and profane places; sacred sites are marked by the presence of divine powers or supernatural forces. The cultural approach, supported by David Chidester and Edward Linenthal, emphasizes conflict; the degree to which people choose to fight and die for a site determines the strength of its sacred character. The phenomenological approach, advocated by James Gibson and Edward Casey, focuses on nature; the topography and the natural setting of landscapes create their sacredness.⁸⁴⁴

Questions for describing the sacred character of a landscape can concentrate on the defining factors of one or more of Lane's approaches. For the ritual approach, what

⁸⁴⁴ Belden C. Lane, "Giving Voice to Place: Three Models for Understanding American Sacred Space," Religion and American Culture 11:1 (Winter 2001): 53-56.

types of intentional ritual activity characterize the cultural landscape under study and may allow it to be experienced as chora rather than as topos? For the ontological approach, what divine powers or supernatural forces do people consider to be present or absent from the site? For the cultural approach, what conflicts have occurred within the landscape which could be considered to contribute to its sacredness? For the phenomenological approach, what natural elements of the landscape play a role in establishing its sacred character? These questions, like the ones relating to the landscape's physical and multisensory dimensions, may be answered briefly and descriptively; in later operations, the researcher can return to those descriptions and analyze their significance.⁸⁴⁵

For the second operation in the study model, careful attention must be given to defining and analyzing the landscape's boundaries, in order to clarify what, where, and when is (was) the landscape under investigation. Boundaries must be set both in space and in time, then explained and analyzed critically. A series of questions can begin to address this issue: Who set the boundaries, when, and why? Who recognized them and who did not? How did different people's perceptions of them form and change over time? How do the boundaries reflect relationships between people and between people and nature? The primary objective at this point is to clearly identify the boundaries; more in-depth analysis, building on the latter questions offered above, can follow in the third, fourth, and fifth operations.

Two additional frameworks can enhance boundary interpretation. First, Americanist Kent Ryden has distinguished between experiential and abstract

⁸⁴⁵ I am indebted to Jennifer Stabler for introducing me to these approaches to studying the sacred.

boundaries. Early colonial boundaries--for example, stone walls--were often tangible, experiential, physically measured and visually marked by landmarks. In contrast, more recent property boundaries have tended to be abstract, intangible, defined on two-dimensional maps or diagrams and translated onto the land itself.⁸⁴⁶ Examining whether a landscape's boundaries were determined and perceived through concrete experience or through abstract planning can assist in analyzing more closely how the landscape's humans interacted with and perceived the land.

Similarly, J.B. Jackson distinguishes between social and political boundaries.⁸⁴⁷ Social boundaries are internally defined; they define a region by its inhabitants within it, and serve to establish a relationship with the area outside it. An example might be a suburban neighborhood. Political boundaries, on the other hand, are externally defined, drawn to isolate the inside and to be conceptually independent of the humans within. An example of this is Iraq, whose boundaries, which were drawn by outsiders, do not relate directly to its inhabitants. Analysis of whether a landscape's boundaries are social or political can reveal who is and has been in control of the landscape, whether they are insiders or outsiders and what that means, and how they relate to and perceive the landscape.

The third operation in the study model attempts to understand the perceptions of the landscape and its components by the different people who altered it or did not alter it. This stage can begin with such questions as: What are these perceptions? How were

⁸⁴⁶ Kent Ryden, Mapping the Invisible Landscape: Folklore, Writing, and the Sense of Place (Iowa City: University Press of Iowa, 1993), 26-36.

⁸⁴⁷ J.B. Jackson, Discovering the Vernacular Landscape (New Haven: Yale University Press, 1984), 15.

they formed? How and why did they change? How did different humans' respective spatial organization patterns reflect their values, beliefs, rules, and landscape perceptions? Here Donald Meinig's ten modes of landscape perception—interpreting the landscape as nature, habitat, artifact, system, problem, wealth, ideology, history, place, or aesthetic—can be incorporated as helpful guidelines.⁸⁴⁸

In particular, issues of aesthetics, Meinig's tenth suggestion, may be examined at this point: What issues of taste, beauty, and appropriateness does a given cultural landscape raise? What are the cultural and political implications of a site's aesthetics? To what extent are its aesthetics considered normative and unproblematic, and with what repercussions? Who, if anyone, stands to gain and to lose from the landscape's design and appearance? These issues may be revisited in the fifth operation during cultural analysis of conflict and power dynamics, but may at least be introduced here while examining the ways in which people perceive the landscape.

Under this operation falls the concept of cognitive landscapes, or landscapes of the mind, which Peirce Lewis has explained as "the mental structures that lie beneath tangible patterns in the landscape."⁸⁴⁹ The point here is that physical form and people's actual spatial conceptions often are mutually independent. And so, building off the work of Lewis, Kent Ryden, Michael Ann Williams, John Michael Vlach, and a growing number of others, the analyst should question not only how and why different people have organized the landscape space physically, but also how they have organized it

⁸⁴⁸ D.W. Meinig, "The Beholding Eye: Ten Versions of the Same Scene," in The Interpretation of Ordinary Landscapes: Geographical Essays, ed. D.W. Meinig (New York: Oxford University Press, 1979), 34-47.

⁸⁴⁹ Lewis, "Learning From Looking," 245.

conceptually or cognitively. What intangible meanings, associations, and functional delineations accompany the components of a landscape, and how do these offer additional insights into individuals' and groups' beliefs and values?

Scholarship by Williams and Vlach helps to illustrate this crucial point. Williams's study of early twentieth-century southwestern North Carolina homes demonstrates that personal narratives may allow recovery of spatial experiences and perceptions that neither physical objects nor documentary evidence alone can explain. Williams compares the structure and uses of three common house types—single pen, double pen, and center passage—and finds that while each type is physically and structurally unique, the three types once shared a single system of spatial use. Residents of each house type concentrated most functions into a single room, kept a conceptually if not physically separated kitchen, and used no formally designated bedrooms. Because surviving house types did not reflect these spatial uses, Williams relies heavily on her fifty informants' testimonies to recreate the layout, vocabulary, and meanings of the houses: verbal accounts alone reveal, for example, that in physically open spaces such as the single pen's principal room, residents nonetheless divided their space functionally and conceptually.⁸⁵⁰

Similarly, John Michael Vlach argues that appearances may be deceiving, that an apparent order may not be the only order. Vlach examines both the traditional, visible landscape of plantation slavery, which reflects the precise geometric order imposed by plantation owners, and the same landscape as reconceptualized by slaves, a

⁸⁵⁰ Michael Ann Williams, Homeplace: The Social Use and Meaning of the Folk Dwelling in Southwestern North Carolina (Athens, Ga.: University of Georgia Press, 1991).

landscape not as plainly visible. While planters manipulated the land as a political and social show of power, slaves refused to acknowledge the imposed symbolic meaning, and instead mentally reconfigured components of the landscape according to their own spatial imperatives. Each type of building within the plantation landscape—Big House, smokehouse, barn, and so on—had a separate function or meaning for the slaves and for the plantation owners.⁸⁵¹ The point is a reminder that landscapes are socially constructed as much as spatially or physically constructed.

In addition, the language of landscape inhabitants or constructors should be a central element of analysis. The terminology and language systems used by groups and individuals both shape and reflect cultural perceptions, and in fact are social constructions as much as landscapes themselves are. Even the most commonly used landscape designations in mainstream discourse carry significant connotations. William Cronon argues, for example, "just how invented, just how constructed, the American wilderness really is. . . . [T]here is nothing natural about the concept of wilderness. It is

⁸⁵¹ John Michael Vlach, Back of the Big House: The Architecture of Plantation Slavery (Chapel Hill: University of North Carolina Press, 1993). For further discussion of slaves' techniques of subversive resistance, see Warren Perry and Robert Paynter, "Artifacts, Ethnicity, and the Archaeology of African Americans," in "I, Too, Am America": Archaeological Studies of African-American Life, ed. Theresa A. Singleton (Charlottesville: University Press of Virginia), 299-310; Lawrence W. Levine, Black Culture and Black Consciousness: Afro-American Folk Thought from Slavery to Freedom (New York: Oxford University Press, 1977), and Leland Ferguson, Uncommon Ground: Archaeology and Early African America, 1650-1800 (Washington: Smithsonian University Press, 1992). Paul R. Mullins extends this argument beyond slavery, arguing that "apparently innocuous material culture, such as bottled goods and canned food, reflect African America's subversion of racism between the mid-nineteenth century and the Depression." See Mullins, "An Archeology of Race and Consumption: African-American Bottled Good Consumption in Annapolis, Maryland, 1850-1930," Maryland Archeology 32 (1996): 1-10.

entirely a creation of the culture that holds it dear."⁸⁵² Cronon demonstrates how the deceptively simple term "wilderness" in fact represents a complex set of ideological constructs with roots deep in the past. Similarly, other terms used to designate categories and elements of landscapes should also be considered for their ideological underpinnings.

Finally, in this third operation focusing on perceptions, the researcher can attempt to evaluate space itself, to consider the spatial relationships between elements of the landscape. One possibility for this approach is anthropologist Edward Hall's system of proxemics. This framework, Hall explains, comprises "the interrelated observations and theories of man's use of space as a specialized elaboration of culture."⁸⁵³ In The Hidden Dimension, Hall introduces three frameworks for thinking about space. The first, sensory spaces, have already been discussed at length. The second, fixed spaces, depends on how permanent is each component of a cultural landscape. Within this system, fixed-feature spaces include both material manifestations (the rooms in a house) and internalized conceptual designs of those spaces (the fixed functions of those rooms). Semifixed-feature spaces allow for flexibility of design and function (a house's mixture of movable furniture and fixed-feature enclosures). Informal spaces are generally tacit and invisible perceptual boundaries, essentially what this model calls landscapes of the mind.⁸⁵⁴

Hall's third framework, perceptual spaces, offers perhaps the most potential, but

⁸⁵² William Cronon, "The Trouble With Wilderness," in The Best American Essays, 1996, ed. Geoffrey C. Ward (Boston: Houghton Mifflin, 1996), 95.

⁸⁵³ Hall, 1.

⁸⁵⁴ *Ibid.*, 97-105.

also the strongest limitation, as Hall developed his system based on his research with almost exclusively northeastern, white, middle-class adults, and warns that other demographic and social groups do follow other patterns. Hall suggests four distance zones within space: the intimate distance zone (0 to 18 inches from the body), personal distance (18 inches to 4 feet), social distance (4 to 12 feet), and public distance (12 to 25+ feet). Each zone is characterized by use in certain social scenarios; for example, individuals usually stay in the social distance zone during casual and impersonal interactions; beyond the range of touch, this zone sees a loss of intimate, textural, and visual detail permitted by the first two zones.⁸⁵⁵

How useful is this in the context of cultural landscape studies? Hall himself gives the caveat that these zones are not universally applicable, so at best this offers an example of one way to think about space, rather than a universal template. Even so, Beverly Gordon and Thomas Schlereth suggest that this framework is readily adaptable to material culture and cultural landscape analysis.

In a case study of several people's reactions to a quilt, Gordon extends Hall's proxemic model from the person-person relationship he describes to the person-object relationship of material culture studies. Hall's justification for proxemics is that, depending on the distance of people's interactions, they respond with attitudes, perceptions, and feelings characteristic of those distances. People interact in similar ways with objects, Gordon points out (and, it may be added, with landscapes as well). What's more, because men and women relate differently to distances due to their respective socializations, gender analysis—not to mention other social lenses—can

⁸⁵⁵ Ibid., 110-121.

enter into the proxemic framework.⁸⁵⁶

Schlereth encourages even more extended use of the proxemic framework, carrying it into the analysis of cultural landscapes. For example, a researcher could find this model useful in analyzing how the inhabitants of an enclosed space such as a historic house may have experienced and interacted with it. Keeping in mind the cultural contingency of Hall's categories, a researcher could use Hall's terms to calculate the average intimate, personal, social, and public distances in different parts of the house, and from those calculations could propose hypotheses about the residents' perceptual world.⁸⁵⁷

Specific questions to be asked of a landscape from this perspective remain to be developed. But Gordon's and Schlereth's uses of proxemics at least offer viable arguments for this type of space-centered evaluation as well as examples of its application. Gordon writes that

the proxemic framework can be used to supplement and build on more traditional forms of analysis and is a useful tool for even seemingly distant subjects such as the meaning of objects and material culture. It offers a new means of understanding the divergent experiences of men and women—one with the potential to help unpack and demystify biases that exist on a less than conscious level.⁸⁵⁸

Proxemic and other spatial relationship analysis, along with attention to cognitive landscapes and to language and terminology, thus serve as the sub-operations to the

⁸⁵⁶ Beverly Gordon, "Intimacy and Objects: A Proxemic Analysis of Gender-Based Response to the Material World," in The Material Culture of Gender, The Gender of Material Culture, ed. Katherine Martinez and Kenneth L. Ames (Winterthur, Del.: Henry Francis Du Pont Winterthur Museum, 1997), 237-252.

⁸⁵⁷ Thomas J. Schlereth, Artifacts and the American Past (Nashville: American Association for State and Local History, 1980), 95-96.

⁸⁵⁸ Gordon, 250.

broader effort to identify the perceptions of the people associated with a landscape.

The fourth step in the study model directly addresses the landscape as a manifestation of material culture, by examining the dynamic, give-and-take triangular relationship between humans, the built environment, and nature. Historian Donald Worster has noted that "no landscape is completely cultural; all landscapes are the result of interactions between nature and culture," necessitating the consideration of agency on all sides.⁸⁵⁹ Study here can thus begin with the simple questions: How did humans act as agents in shaping the landscape and the built environment? How did nature act as agent? How did artifacts act as agents? How did the three affect each other and respond to each other? Deeper analysis should then emphasize how internal relationships affect the landscape: how nature interacts with itself (for example, in terms of climate and animal life), and how different groups of humans interact with each other.

The fifth and final operation, cultural analysis, should underlie the previous steps even before it is given explicit attention here. This operation addresses the relationship of the cultural landscape to aspects of the cultures associated with it, similar to E.M. Fleming's similar operation which examines "in depth the relation of the artifact to its own culture."⁸⁶⁰ Using the mostly descriptive information gathered from the previous operations, the researcher now evaluates the relationship between the landscape and its human actors, by relating the different uses and perceptions of the landscape to the social, political, economic, or cultural contexts that surround them. What ideologies, meaning systems, social systems, shared beliefs, attitudes toward

⁸⁵⁹ Donald Worster, "Seeing Beyond Culture," Journal of American History 76 (1990): 1144.

⁸⁶⁰ Fleming, 157.

nature, attitudes toward people, can the landscape help to understand? How do the boundaries, perceptions, and dynamic tensions previously identified shed light on these issues?

In exploring the contexts of a specific cultural landscape, it may be useful to consider it as the materialization of a confluence of discourses, or as a node at the intersection of cultural networks. "Discourse," geographer Richard Schein suggests, may be understood as "shared meanings which are socially constituted, ideologies, sets of common sense assumptions. . . . [a] social framework of intelligibility, within which all practices are communicated, negotiated, or challenged."⁸⁶¹ Because the decisions which go into the physical and cognitive constructions of a landscape are embedded in these social discourses, the landscape both symbolizes those discourses and is a constitutive part of their continuous development and reinforcement. In his case study of Ashland Park, Kentucky, for example, Schein discusses how a specific neighborhood serves as the materialization of discourses of landscape architecture, insurance mapping, zoning, historic preservation, neighborhood assumptions, and consumption.⁸⁶² Researchers can ask similar questions of their own landscapes: what set of social discourses does a cultural landscape symbolize, and how does it contribute to the development and reinforcement of those discourses?

It is important to keep in mind that a landscape constitutes an ongoing process--not a stagnant, two-dimensional image--in which perceptions continuously change and

⁸⁶¹ Richard H. Schein, "The Place of Landscape: A Conceptual Framework for Interpreting an American Scene," Annals of the Association of American Geographers 87:4 (1997): 663. In the definition cited, Schein draws on the work of James S. Duncan.

⁸⁶² *Ibid.*, 664-675.

elements are constantly retained or rejected. Questions toward this point can include consideration of who first altered or created specific landscape components, when, and why; what those components meant to other persons at that time and at later times; and why specific elements were retained or altered at different times.

Several lines of questioning offer depth to this operation. The first focuses on the contested meanings of objects and landscapes and on the power struggles to assign meaning to and assert agency over them. "The structure and content of buildings, rooms, and streets," Angel Kwollek-Folland writes,

reveal struggles and compromises over meaning and use and pass on the results of such contests. When space and time become an arena of disagreement, their physical and verbal articulations reveal both underlying cultural assumptions and the process whereby those assumptions are modified.⁸⁶³

Among many examples, recent work has analyzed the late twentieth-century conflicts over shaping the landscape at Antietam National Battlefield and the tensions through that century between national parks and American Indian reservations, which have often competed for the same sites.⁸⁶⁴ James Loewen's opus on American monuments and markers is an excellent introduction to the power struggles and local and national debates over both historical and contemporary meanings which the markers can

⁸⁶³ Angel Kwollek-Folland, "The Gendered Environment of the Workplace, 1880-1930," in The Material Culture of Gender, The Gender of Material Culture, ed. Katherine Martinez and Kenneth L. Ames (Winterthur, Del.: Henry Francis Du Pont Winterthur Museum, 1997), 158.

⁸⁶⁴ Susan Trail, "Creation of the Commemorative Landscape at Antietam National Battlefield," Ph.D. dissertation, University of Maryland, College Park, forthcoming; Robert H. Keller and Michael Turek, American Indians and National Parks (Tucson: University of Arizona Press, 1998).

represent.⁸⁶⁵

Researchers similarly examining power and conflict in specific landscapes might ask the following: What competing or coexisting meanings characterize or have characterized the cultural landscape? Do these meanings in fact compete, or do they peacefully coexist? Under what circumstances were these meanings assigned to the landscape? Who is or has been responsible for the assigning? Which meaning, if any, is or has been dominant? What local and/or national contextual conditions might help to explain why that meaning achieved dominance? Who has had the power to shape the cultural landscape itself and to access it, and who has been denied the powers of creation and access?

Contests over power, meaning, and access also play out with respect to the representations of landscapes. Bruce Johansen has suggested a set of questions to aid in this portion of landscape interpretation: What representations or images are associated with the landscape, and what are their origins? What groups and/or individuals play roles in the production of those representations, and what groups or individuals are excluded from the production process? What effects do the representations have on the landscape itself? Do they come to assume a life of their own, independent of the site itself, in effect becoming the cultural landscape? What elements of the actual landscape are and are not included in the representations, and who is and is not included in the target audience? What overt and covert messages and ideologies are inherent in the representations? How do multiple representations of the same landscape contrast with

⁸⁶⁵ James W. Loewen, Lies Across America: What Our Historic Sites Get Wrong (New York: New Press, 1999).

each other?⁸⁶⁶ Answers to these questions about power and contested meanings should consider the effects of social categories, such as race, class, gender, ethnicity, and sexuality. To promote such interrelated analysis, the model places consideration of social categories and power dynamics next to one other within the cultural analysis operation.

In the last decade, material culture studies has seen tremendous growth in scholarship addressing artifacts, vernacular architecture, and cultural landscapes in terms of race, class, gender, ethnicity, and sexuality.⁸⁶⁷ Rather than list a separate set of considerations for each category of identity, I provide one example by focusing on using gender as a lens for analysis. A brief review of case studies by Angel Kwolek-Folland and William D. Moore on the intersection of gender, cultural landscapes, and material culture helps to generate a set of questions which could be applied to other

⁸⁶⁶ Bruce Johansen, email to Jeremy Korr, 1 August 2001. For further discussion and case studies of issues of landscape image and representation, see Gerry Kearns and Chris Philo, ed., Selling Places: The City as Cultural Capital, Past and Present (Oxford: Pergamon Press, 1993); Charles Ruetheiser, Imagineering Atlanta: The Politics of Place in the City of Dreams (New York: Verso, 1996); Nancy Stieber, "Microhistory of the Modern City: Urban Space, Its Use and Representation," Journal of the Society of Architectural Historians 58:3 (September 1999): 382-391; Stephen V. Ward, Selling Places: The Marketing and Promotion of Towns and Cities, 1850-2000 (London: Routledge, 1998); and Chris Wilson, The Myth of Santa Fe: Creating a Modern Regional Tradition (Albuquerque: University of New Mexico Press, 1997).

⁸⁶⁷ See, for example, Exploring Everyday Landscapes: Perspectives in Vernacular Architecture, VII, ed. Annmarie Adams and Sally McMurry (Knoxville: University of Tennessee Press, 1997); The Material Culture of Gender, The Gender of Material Culture, ed. Katherine Martinez and Kenneth L. Ames (Winterthur, Del.: Henry Francis Du Pont Winterthur Museum, 1997); Gender, Class, and Shelter: Perspectives in Vernacular Architecture, V, ed. Elizabeth Collins Cromley and Carter L. Hudgins (Knoxville: University of Tennessee Press, 1995); Kirk Savage, Standing Soldiers, Kneeling Slaves: Race, War, and Monument in Nineteenth-Century America (Princeton: Princeton University Press, 1997); and Keep Your Head to the Sky: Interpreting African American Home Ground, ed. Grey Gundaker (Charlottesville: University Press of Virginia, 1998).

fieldwork. These gender-based questions can be used to apply other social categories as well, by replacing references to gender with race, class, or others.

In a recent analysis of the workplace between 1880 and 1930, Kwollek-Folland argues that "to the extent that spatial arrangements make manifest the abstract social relations of gender, they provide a unique way to analyze and understand not only the gender systems of a given culture as these systems change over time but also the way gender systems are implicated in the creation of power structures such as status."⁸⁶⁸ The indoor cultural landscape of the office encouraged the maintenance and further development of gender differences both spatially and socially. Common overt discussions of male and female skills, metaphorical uses of maleness and femaleness, and spaces built or patterned to accommodate and manipulate gender difference all contributed to this phenomenon in the late nineteenth and early twentieth centuries (and probably earlier and later as well).

For example, domesticated private offices communicated the manhood of their occupants through such physical items as bearskin rugs and overstuffed chairs. This type of furnishing was considered inappropriate for women, who in any case did not generally hold the higher positions needed to occupy this kind of private office; correspondingly, men who did not command this type of space were at times considered less masculine. Anterooms adorned with couches and chairs reinforced leisurely and vain constructions of femininity, while the sparse placement of women's rest rooms both inconvenienced women and embarrassed them as it became apparent where they

⁸⁶⁸ Kwollek-Folland, 158.

were going each time they left their office room and headed for the stairs.⁸⁶⁹ Kwolek-Folland's analysis and conclusions are well supported by the convincing connections she draws between the social and spatial worlds of the office, which together reinforced gender codes familiar from the world outside the workplace.

Like Kwolek-Folland, William D. Moore evaluates a historic interior space in terms of gender, but his analysis focuses entirely on masculinity. Using architectural, artifactual, and documentary evidence, Moore argues that turn-of-the-century Masonic lodge rooms were manifestations of larger societal changes, especially in religion and conceptions of gender. Themes of hierarchy and social incorporation were integral to the rooms' function and design. These spaces, which served as theaters and sites of worship, reinforced and exaggerated the characteristics ascribed to masculinity in the outside world.⁸⁷⁰

Spatial arrangements in the lodge rooms contributed to a hierarchical system. Officers sat in oversized, elevated, ornamental seats, while most members sat in identical settees around the room's perimeter. The settees, which all faced the center of the room and allowed the members to see each other, manifested in material form the abstract idea of male fraternity and reinforced a group dynamic. The rest of the world was physically shut out: lodge rooms had no windows, or else their windows were shuttered or blurred by stained glass. Long staircases and frequent soundproofing also promoted the sense of belonging to the group by excluding outsiders. These physical

⁸⁶⁹ Ibid., 166-168.

⁸⁷⁰ William D. Moore, "The Masonic Lodge Room, 1870-1930: A Sacred Space of Masculine Spiritual Hierarchy," in Gender, Class, and Shelter: Perspectives in Vernacular Architecture, V, ed. Elizabeth Collins Crumley and Carter L. Hudgins (Knoxville: University of Tennessee Press, 1995), 26.

spaces emphasized hierarchy and corporate identity, in the ways Moore points out, because through those themes Masons responded to changes to conceptions of masculinity in society at large, which were themselves responses to shifting social and economic conditions.⁸⁷¹

Moore's method of analysis, not his actual argument, is where his essay is most valuable. He follows what is essentially a four-step process: 1. Describe the space within the cultural landscape. 2. What values are emphasized by the spatial construction of (and, secondarily, by the social activity within) that landscape? 3. Among those values, which reinforced societal conceptions of masculinity and femininity, and the tensions between them? How did they reinforce those conceptions? 4. How do those processes of gender construction and reinforcement relate to the cultural landscape's societal context? Moore's framework mirrors my own model in its progression from description to analysis. More significantly, his framework could be applied to other social categories as well, by replacing gender, masculinity, and femininity in steps 3 and 4 with, for example, race, class, ethnicity, or sexuality.

Drawing in part from Moore's and Kwolek-Folland's essays which take a gendered perspective, the following set of questions may be useful for fieldwork use in evaluating cultural landscapes through a gender lens: (1) In what ways has the cultural landscape been gendered? I.e., in what ways does it incorporate elements of masculinity, femininity, or other genders? How do values and beliefs incorporated into the cultural landscape reinforce or challenge societal gender expectations? Grant McCracken, whose own essay offers additional questions to ask of the gendered

⁸⁷¹ Ibid., 27-36.

relationship between objects and people, phrases it this way: How do the components of the cultural landscape create and transform the experience of culturally constituted gender?⁸⁷² (2) Who is and/or was responsible for this process of gendering? When? For what reasons? (3) Do or did the cultural landscape's creators, users, and alterers accept or subvert traditional gender roles? How did the cultural landscape encourage or discourage them, in either case?

(4) How does the cultural landscape's reinforcement or rejection of traditional gender roles, covered in the first and third questions above, relate to the cultural landscape's societal context? For example, Moore, after identifying components of Masonic lodge rooms which reinforced traditional conceptions of masculinity, positions that process of reinforcement as a response to certain social and economic conditions in the U.S. at large.⁸⁷³ (5) For consumer-related cultural landscapes such as theme parks, supermarkets, and shopping malls: How does the cultural landscape's promotion and marketing contribute to its gendering? How do its "atmospherics"--its deliberate manipulation of the different senses--contribute to its gendering? (6) Power dynamics: From the vantage point of gender, who is permitted, encouraged, and prohibited from accessing the cultural landscape? By whom? On what grounds? (7) How, if at all, does the cultural landscape contribute to substantiating and naturalizing "asymmetries of power and status between men and women?"⁸⁷⁴

⁸⁷² Grant McCracken, "The Voice of Gender in the World of Goods: Beau Brummel and the Cunning of Present Gender Symbolism," in The Material Culture of Gender, The Gender of Material Culture, ed. Katherine Martinez and Kenneth L. Ames (Winterthur, Del.: Henry Francis Du Pont Winterthur Museum, 1997), 444.

⁸⁷³ Moore, 26-39.

⁸⁷⁴ McCracken, 444.

The next sub-operations of cultural analysis concern absent components and variable survivability. By absent components, I mean that every landscape reflects a set of decisions not only how to construct it, but also how not to construct it. The ways in which people choose not to alter a landscape are as culturally valuable as their decisions which do lead to alterations. The decision not to build the Disney's America historical theme park in Haymarket, Virginia, for example, leaves no visible trace on the landscape, but certainly does reflect the values of the many people involved in that decision.⁸⁷⁵ In this and similar cases, questions can target the entire decision-making process: why did different groups and individuals decide to make certain changes and not others? How did they designate visible or invisible boundaries between sites to be altered in different ways (e.g., between a "wilderness area" and adjacent land)?

Variable survivability is a point brought to attention by Cary Carson and others: the structures, components, and boundaries of a landscape at any given time are not necessarily representative of corresponding elements at any earlier or later time. In particular, extant artifacts or dwellings should not automatically be considered to represent the majority of similar forms from their time period. Carson et al. argue, for example, that colonists in the Chesapeake region tended to build flimsy, impermanent shelters and houses because hiring builders was expensive and typical lifespans were short. Families thus tended to dedicate their resources to their work and to tangible short-term benefits; as a result, the few well-built structures that survived into the recent

⁸⁷⁵ See Mike Wallace, Mickey Mouse History and Other Essays on American Memory (Philadelphia: Temple University Press, 1996), 163-168. Haymarket is located in Prince William County, about 25 miles west of the Capital Beltway.

past were not indicative of the prevailing Chesapeake colonial architectural patterns.⁸⁷⁶ Landscape analysis should recognize that any structure (or absence of structure) seen or studied may represent an anomaly that has survived for any number of reasons, rather than the norm. If so, the researcher may consider the reasons both for survival of the anomalous form and for disappearance of the standard form.

Final issues to consider under this operation include the roles of technology and of the scholar. First, as Peirce Lewis has suggested, the tools or technology that a given group or individual used to shape the landscape, as well as the manner in which they used that tool, can be analyzed to understand more clearly their perceptions toward the landscape and intentions in altering it. While "the effects of any tool depend on the level of technological sophistication, and also on a society's ability to pay for it," the manner in which individuals actually use their tools (when known) can also give insight into social relations and cultural roles by age, gender, race, and class.⁸⁷⁷ Questions here include: Who created the tools used to shape the landscape, how, when, and where? How did those individuals who used the tools acquire them? Who used the tools, and what terms did they apply to the process? How did those particular tools shape the landscape in a way that alternative ones did not?

Lastly, the inherently subjective role of the scholar in the interpretation process must be recognized and addressed substantively. To some extent, this is a fundamental assumption of all scholarship: the writer's perspective will necessarily inform the

⁸⁷⁶ Cary Carson, Norman F. Barka, William M. Kelso, Garry Wheeler Stone, and Dell Upton, "Impermanent Architecture in the Southern American Colonies," Winterthur Portfolio 16 (1981): 135-178.

⁸⁷⁷ Lewis, "Learning From Looking," 249.

writer's analysis and narrative. Researchers must be conscious at all times that even as they identify and explain the perceptions of others, they are necessarily framing their perceptions with their own meaning and language systems, so that interpretation will always be to some extent a work of translation. The responsible text is one which directly addresses this phenomenon as a component of the analytical process, rather than one which hides behind a translucent shield of assumed objectivity.

This study model is applicable to a variety of sites, including both urban and rural landscapes. Because the crux of a cultural landscape is its dynamic triangular relationship, any landscape can be analyzed in part by evaluating the balance between humans, nature, and the built environment. This triangle works even when the visible signs of one or more components are minimal. Study of a treeless block of urban row houses, for example, could consider why and how humans and built structures have overshadowed nature; study of a park could analyze why and how human and architectural presence is minimal.⁸⁷⁸ Ecologist Alice Ingerson has demonstrated persuasively how frequently scholars--scientists, humanists, and those who claim to bridge the divide--discount humans or nature as agents in creating landscapes, thereby yielding unnecessarily one-sided perspectives.⁸⁷⁹ But a comprehensive understanding of any cultural landscape can develop from applying this triangular approach which respects all agents of the landscape.

⁸⁷⁸ For a more detailed discussion of techniques for interpreting explicitly urban sites, see Eric Sandweiss, "Mind Reading the Urban Landscape: An Approach to the History of American Cities," in Historical Archaeology and the Study of American Cultures, ed. Lu Ann De Cunzio and Bernard L. Herman (Winterthur, Del.: Henry Francis Du Pont Winterthur Museum, 1996), 319-357.

⁸⁷⁹ Alice E. Ingerson, "Tracking and Testing the Nature-Culture Dichotomy," in Historical Ecology: Cultural Knowledge and Changing Landscapes, ed. Carole L. Crumley (Santa Fe: School of American Research Press, 1994), 43-66.

It would be unrealistic to pretend, however, that a single set of guidelines can apply wholesale to every landscape. These operations and questions should be revised, adapted, and even reordered appropriately for every individual study. Cultural landscape study is a difficult arena: beyond the dual relationship between humans and artifacts in material culture, landscape analysts must consider the additional agent of nature, which introduces a new set of dynamics. Still, by asking the right questions, some of which this study model is intended to provide, analysts can study cultural landscapes as material culture with an eye toward understanding ever more clearly humans' beliefs, values, and conventions.

APPENDIX B

WEB SURVEY



UNIVERSITY OF MARYLAND

Capital Beltway Questionnaire

*City and car, like
Man and woman wedded with
A ring forever.*

-- Beltway haiku by Ira Gitlin, 1990. Used by permission.

My name is Jeremy Korr and I am a doctoral candidate in the Department of American Studies at the University of Maryland, College Park. I would like to ask you a series of questions about the Capital Beltway, in order to better understand the role the Beltway plays in the Washington area and in people's lives. In pretests, most people finished the questionnaire in 20-30 minutes. I very much appreciate your help. Click [here](#) if you'd like an overview of my dissertation, *Washington's Main Street: Consensus and Conflict on the Capital Beltway, 1952-2001*, before you complete this questionnaire.

In some questions, you will see a series of possible answers. The question will prompt you to click in the circles or squares *to the left* of the answer(s) you choose. Other questions ask you to write in your answers. At the end of the questionnaire you will have an opportunity to write in clarifications for any answers you feel need further explanation. **You may skip any questions EXCEPT for those in parts A and E.** It is important for purposes of this questionnaire that an adult 18 years of age or older answer these questions.

If you don't have time to complete the entire questionnaire now, you may submit part of it, include your email address where prompted, and complete and submit the rest later; I can match up the two parts using your email address. Alternatively, you may print out this document and send your response by mail to Jeremy Korr, c/o Department of American Studies, 2125 Taliaferro Hall, University of Maryland, College Park, MD 20742-8821. Please email me with your questions or concerns. And please tell others (even outside the Washington area) about this questionnaire: each response contributes to a richer and more detailed portrait of the Beltway.

[Please click here to begin the Capital Beltway questionnaire.](#)

Special thanks to Dr. Lillie S. Ransom, Debra DeRuyver, John Cordes, and Dr. Jenny Thompson (University of Maryland) and Zachary M. Schrag (Columbia University) for their assistance in developing this questionnaire.

[Return to Jeremy Korr's home page.](#)



UNIVERSITY OF
MARYLAND

Capital Beltway Questionnaire

Please remember to complete Parts A and E of this questionnaire--otherwise the system will refuse to accept your submission! You may select whichever questions you like from the remaining sections of the questionnaire.

Part A: Permission (please complete this section)

1. *Permission.* By submitting this form, I give Jeremy Korr, University of Maryland doctoral candidate, permission to use my responses, without compensation, for his research on the Capital Beltway. I understand that my responses may be used in lectures, publications, and other presentations which Mr. Korr may make.

☐ I agree.

2. *Identification.* Your answer to this question will determine the degree of confidentiality of your responses. Please choose one:

- ☐ Use my name (or direct identifiers) as appropriate in presentations and/or publications.
- ☐ Do not use my name or direct identifiers in presentations and/or publications. Instead, describe me in demographic terms (for example, a 27-year-old woman from Vienna).
- ☐ Do not use my name, direct identifiers, or demographic description in presentations and/or publications.

3. *Follow-up.* May I contact you for a follow-up interview or clarification? If **no**, please skip this question. If **yes**, please fill in the spaces below. Your name and contact information will remain confidential and will be used **only** to reach you for a follow-up interview or clarification. I will not share your name or contact information with any individual or organization. Follow-up interviews will be conducted between September 2000 and May 2001.

Name:

Phone number:

Best time to call:

Email address:

Part B: Opinions

1. We'll begin with a little word association. What **word or phrase** first comes to mind when you think of the Capital Beltway?

2. In what ways do you think the Capital Beltway is and/or has been an **advantage** to the Washington, DC area?

3. In what ways do you think the Capital Beltway is and/or has been a **disadvantage** to the Washington, DC area?

4. Can you think of any parts of the Beltway or its adjacent landscape which look especially **nice**?

5. Can you think of any parts of the Beltway or its adjacent landscape which look especially **ugly**?

6. Do you have a **favorite** and/or a **least favorite** part of the Beltway? If you have either or both, please identify and explain.

7. If you considered the Capital Beltway as a **tourist site**, what would be the highlights?

8. How has **your role, with respect to the Beltway**, influenced your thoughts and attitudes toward it? For example, if you are a trucker who regularly uses the Beltway, you probably have a significantly different perspective than if you were a daily commuter, a police officer, a construction worker, a police officer, a politician, a person who lives next to the highway, or a through traveler.

9. What, in your opinion, **distinguishes** the Capital Beltway from other high-speed highways? In your answer, you might identify other highways which you believe provide a strong contrast to the Beltway in some way.

10. What thoughts, if any, do you associate with the terms **"inside the Beltway"** and **"outside the Beltway"**?

11. Can you think of any ways the Capital Beltway might be considered a **boundary**?

Part C: Experiences

1. Which of the following activities have you participated in **at least once** while driving or traveling as a passenger on the Capital Beltway? Please check all that apply. After making your choices, you will find space to elaborate if you wish.

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> a. Ran out of gas | <input type="checkbox"/> b. Skidded on water, ice, or snow | <input type="checkbox"/> c. Witnessed an accident occur | <input type="checkbox"/> d. Involved in an accident |
| <input type="checkbox"/> e. Involved in a police stop | <input type="checkbox"/> f. Used a CB radio | <input type="checkbox"/> g. Used a cellular phone | <input type="checkbox"/> h. Sent or received a fax |
| <input type="checkbox"/> i. Sent or received email | <input type="checkbox"/> j. While driving, read from a newspaper, book, or other material | <input type="checkbox"/> k. Became lost | <input type="checkbox"/> l. Drove in reverse |
| <input type="checkbox"/> m. Used the horn to honk at another driver | <input type="checkbox"/> n. Swore at another driver loud enough for the driver to hear | <input type="checkbox"/> o. Made obscene gestures toward another driver | <input type="checkbox"/> p. Attempted to cut off another driver |
| <input type="checkbox"/> q. Engaged in a race | <input type="checkbox"/> r. Experienced a panic attack | <input type="checkbox"/> s. Applied makeup | <input type="checkbox"/> t. Brushed your teeth |
| <input type="checkbox"/> u. Shaved a part of your body | <input type="checkbox"/> v. Had a sexual and/or romantic experience | <input type="checkbox"/> w. Urinated or defecated | <input type="checkbox"/> x. Other special activity or experience |

Now, please elaborate on as many of your responses to the previous question as you choose. Please use the letters as reference marks. For example, if you decide to explain a panic attack (letter "r"), you might write "r--I had a terrible panic attack about 10 years ago during an evening downpour near Telegraph Road...." You may also explain any other special experiences as marked under letter "x" above.

2. Have you ever driven **all the way around the Beltway** in a single, continuous trip (choose one)?

- ☐ Yes, once ☐ Yes, more than once ☐ No, never.

If your answer was yes, please describe the circumstances here.

3. Have you ever intentionally **avoided** driving on the Capital Beltway, when traveling in the Washington area (choose one)?

- ☐ No, never ☐ Yes, but rarely ☐ Yes, sometimes ☐ Yes, often ☐ Yes, virtually always ☐ Not applicable

If your answer was **yes**, please elaborate here.

4. Have you ever **dreamed** about the Capital Beltway? If **no**, please skip this question. If **yes**, please describe here:

5. Can you think of **any unusual anecdotes or experiences** you have had with the Capital Beltway, beyond anything you've already mentioned? If **no**, please skip this question. If **yes**, please describe here:

Part D: Early memories (for those who were there)

This section is for those Beltway veterans who recall its early days and before. If you are not among this group, skip this section and move on to Part E.

1. What memories can you recall of traveling between Washington's suburbs **before the Capital Beltway** was open? For example, you might remember the traffic or road conditions, or specific anecdotes.

2. What memories can you recall of the Beltway **while it was under construction** (1957-1964)?

3. Can you share any memories of the Beltway's **Opening Day** (August 17, 1964 in Maryland, or April 2, 1964 in Virginia) or **subsequent first weeks of full use**?

Part E: A few demographic questions (please complete this section)

1. How old are you?

2. What is your gender? ☐ Female ☐ Male

3. What is your race? (The following are the options printed on the 2000 federal census form.)

☐ White ☐ Black or African American ☐ American Indian and Alaska Native ☐ Asian ☐ Native Hawaiian and Other Pacific Islander ☐ Some other race:

4. Are you employed: ☐ Full time ☐ Part time ☐ Not employed

5. Where is your primary residence located?

Town/city:

County:

State/territory:

Country (if not USA):

6. What formal education have you completed?

☐ Less than high school ☐ High school ☐ Technical school ☐ Some college ☐ College ☐ Master's degree or equivalent ☐ Doctorate or equivalent

7. Is your household's annual income:

☐ Less than \$20,000 ☐ \$20,000 - \$34,999 ☐ \$35,000 - \$49,999 ☐ \$50,000 - \$74,999 ☐ \$75,000 - \$99,999 ☐ \$100,000 - \$149,999 ☐ \$150,000 or more

8. In total, how many cars, trucks, and vans does your household own or rent?

☐ Zero ☐ One ☐ Two ☐ Three ☐ Four ☐ Five ☐ Six or more

9. In total, how many bicycles does your household own?

☐ Zero ☐ One ☐ Two ☐ Three ☐ Four ☐ Five ☐ Six or more

10. For non-recreational purposes, I regularly use the following modes of transportation (check all that apply):

☐ car (other than taxi) ☐ truck ☐ van pool ☐ train ☐ bus ☐ plane
☐ helicopter ☐ taxi ☐ walking ☐ bicycle ☐ roller blades ☐ boat or skates

11. Are you a member of an automobile, truck, motorcycle, or bus organization (for example, AAA)?

- ☐ Yes, currently
- ☐ No, but I used to be a member
- ☐ No, neither now nor in the past

12. You use the Capital Beltway primarily for (check one):

- ☐ work-related traveling
- ☐ non-work related traveling
- ☐ work related and non work related travel equally
- ☐ none of the above

13. When driving or riding on the Capital Beltway, you use (check one):

- ☐ the Maryland portion of the Beltway almost exclusively
- ☐ the Virginia portion of the Beltway almost exclusively
- ☐ portions of the Beltway in Maryland and Virginia, but mostly in Maryland
- ☐ portions of the Beltway in Maryland and Virginia, but mostly in Virginia
- ☐ the Maryland and Virginia portions equally
- ☐ none of the above

14. You use the Capital Beltway primarily for (check one):

- ☐ shorter-distance travel (3 or fewer exits)
- ☐ medium-distance travel (4 to 7 exits)
- ☐ longer-distance travel (8 or more exits)
- ☐ combination of the above
- ☐ I rarely or never use the Capital Beltway
- ☐ other

15. How did you learn about this questionnaire?

Conclusion

In the space below, please write in any other information about yourself, your experience with the Beltway, or your thoughts about the Beltway, which you have not already mentioned and which you think may be important to an understanding of the topic.

If you have any **visual representations** of the Capital Beltway which you would like to share (such as photos, drawings, or doodles), please feel free to mail them to Jeremy Korr, c/o Department of American Studies, 2125 Taliaferro Hall, University of Maryland, College Park, MD 20742-8821. Your submissions will be considered as part of your response to this questionnaire. Please note whether you would like your submission returned.

Thank you for taking the time to complete this questionnaire. I appreciate your contribution toward building a more detailed understanding of the Capital Beltway. Click the "Submit" button below to submit your survey. Please write your email address below before clicking "submit" if you would like to continue answering the questionnaire later, or if you have previously submitted a partial set of responses (I will match your submissions using your email address).

Email address:





Figure 1. Washington, D.C., metropolitan area. The Capital Beltway appears here as I-495 and I-95. Source: "Maryland Official Highway Map" (Baltimore: Maryland Department of Transportation, State Highway Administration, 1999).

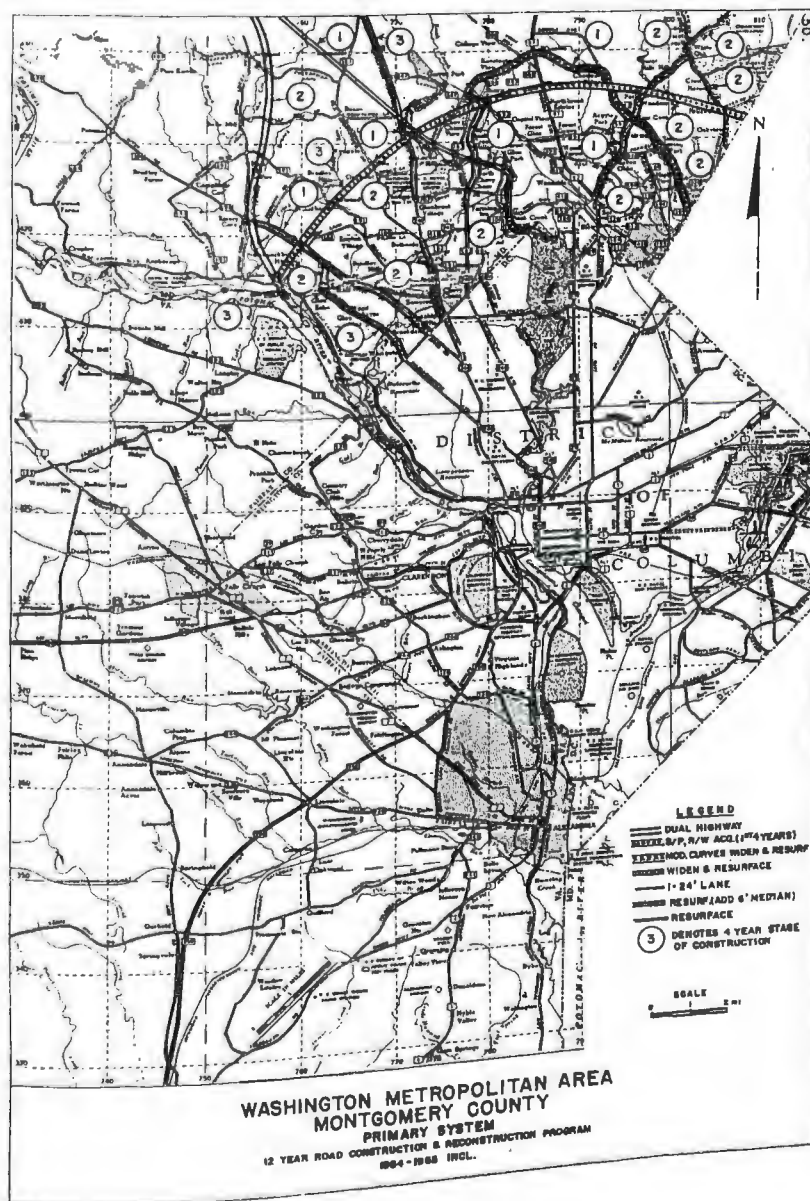


Figure 2. 1952 design for the Capital Beltway in Montgomery County, Md. The Beltway is represented by the curved arc, which passes through Cabin John at its western end and Hillandale at its eastern, as noted in separate discussions in the text. Source: State Roads Commission of Maryland and Advisory Council to the Commission, Detail Sheets and Maps Showing Locations of Road Construction and Reconstruction in the Proposed Twelve-Year Program ([Baltimore]: The Commission, 1952), 50.

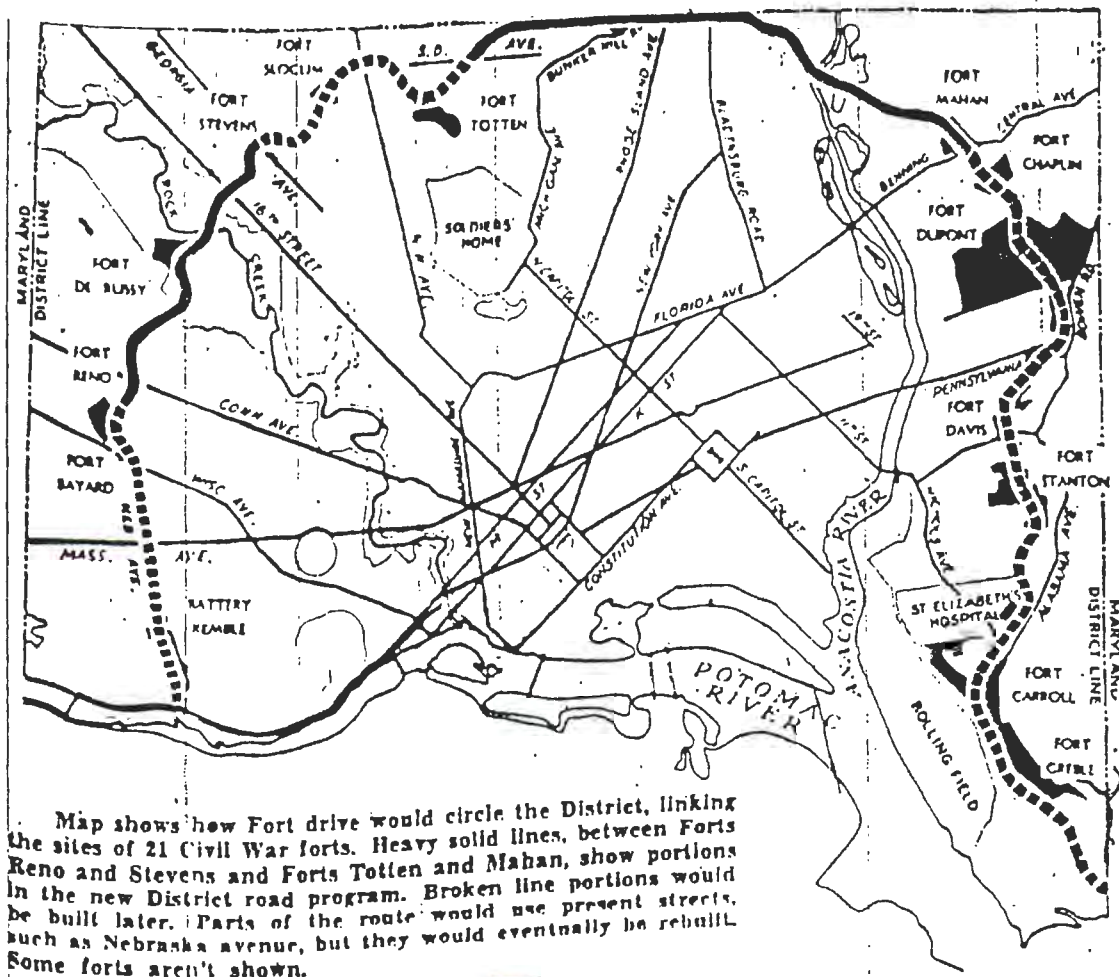


Figure 4. Fort Drive, 1952 map. Source: James G. Deane, "1901 Plan for Linking Forts Revived as an Aid to Traffic," *Evening Star*, 2 March 1952: A-8. Copyright 1952, *The Washington Post*, reprinted with permission.

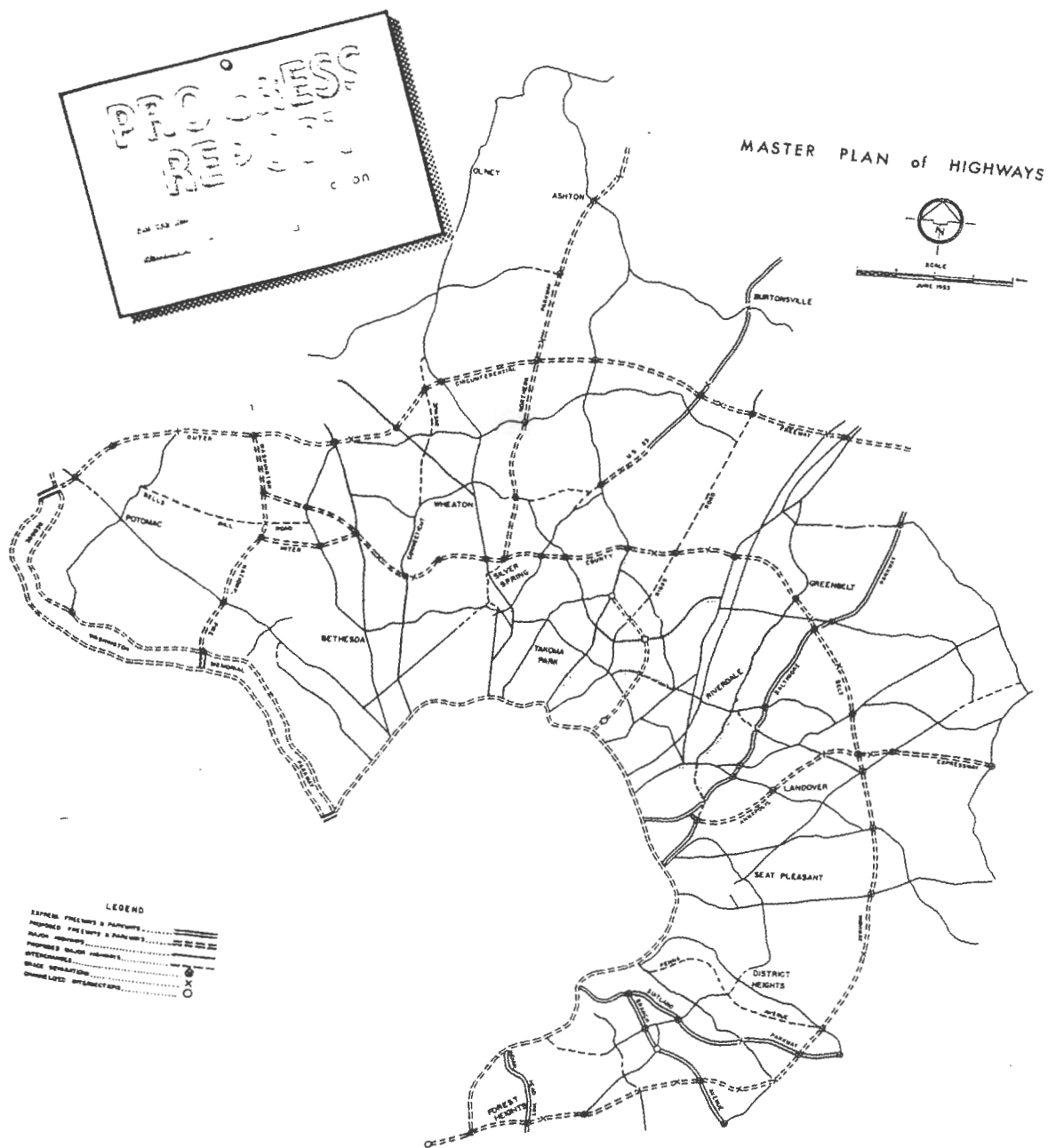


Figure 5. 1955 progress report of highway construction for Montgomery and Prince Georges Counties, Md. The three concentric ring roads pictured, from innermost to outermost, are Fort Drive (unlabeled), the Capital Beltway (labeled "Inter County Belt Highway"), and the Outer Beltway (labeled "Outer Circumferential Freeway"). Source: Maryland-National Capital Park and Planning Commission., M-NCPPC Annual Report No. 30 (Riverdale, Md.: M-NCPPC, 1957), 19.

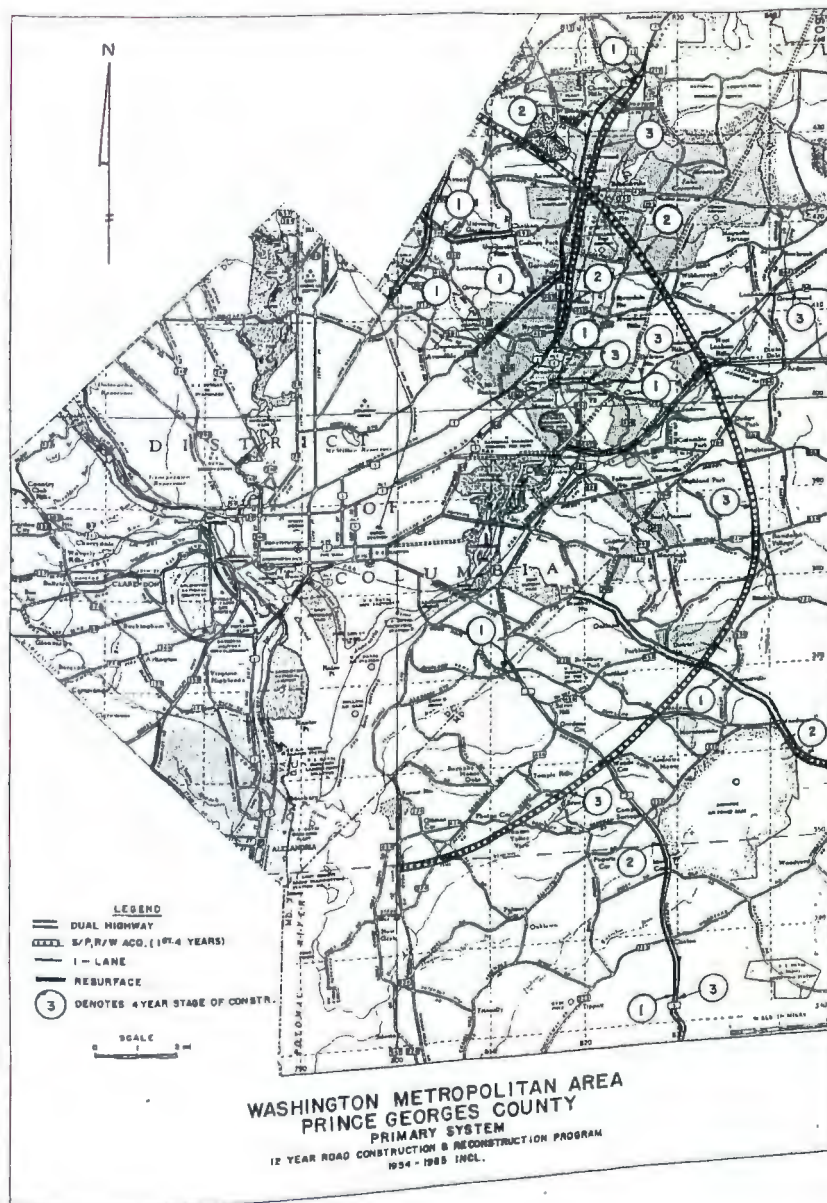


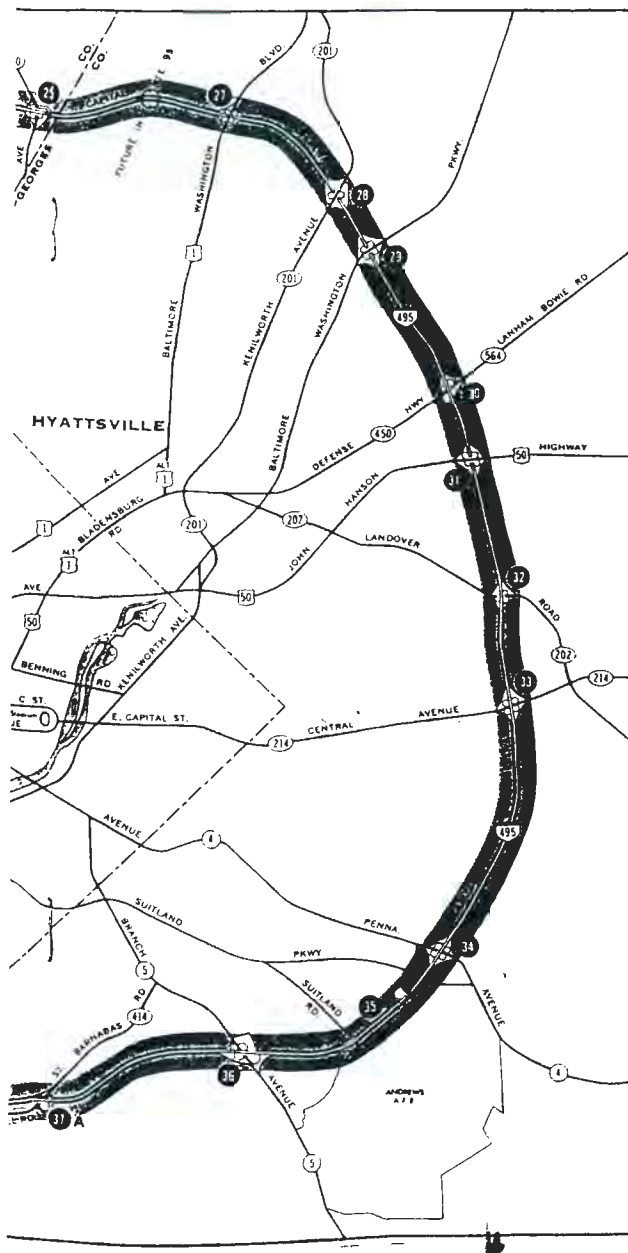
Figure 6. 1952 design for the Capital Beltway in Prince Georges County, Md. The Beltway is represented by the curved arc, which passes through Berwyn at its intersection with a similar dotted line just east of U.S. 1 (the word "Berwyn" is obscured except for the "N"). Source: State Roads Commission of Maryland and Advisory Council to the Commission, Detail Sheets and Maps Showing Locations of Road Construction and Reconstruction in the Proposed Twelve-Year Program ([Baltimore]: The Commission, 1952), 60.

capital beltway contractors

AAA Steel Service Co., Inc. — Reinforcing Steel
 Allied Contractors, Inc. — Bridges
 American Bridge Co. — Struct. Steel Erection
 Arundel Asphalt Products, Inc. — Bit. Conc. Paving
 Asher, F. P., Jr. — Excavation
 Atlas Machine and Iron Works, Inc. — Struct. Steel Erection
 Ballenger Paving Co., Inc. — Road Constr.
 Barnhill Contracting Co. — Road Constr.
 Bay City Construction Co., Inc. — Structures
 Berks Steel Service, Inc. — Reinforcing Steel
 Bituminous Construction Co., — Bit. Concrete Paving
 Bowers Construction Co. — Structures
 Brick and Blockwork, Inc. — Slope Protection
 Brigham, A. E. — Clearing and Grubbing
 Burger Construction Corp. — Bridges
 Burkholder and Burkholder. — Grading and Drainage, Bit. Concrete Paving
 Campbell, W. P. Construction Co. — Bridges
 Carroll, Thomas E. and Son, Inc. — Landscaping
 Case, H. D. Inc., Case Constr. Corp. — Structures
 C. C. and T. Construction Co., Inc. — Drainage
 Columbus Contractors, Inc. — Box Culvert
 Contee Sand and Gravel Co., Inc. — Roadway Construction
 Contractors Paving Co., Inc. — Curb and Gutter
 Eastburn, Henry C. and Son, Inc. — Bridge and Roadway Construction
 Edgell Construction Co., Inc. — Soil, Cement
 Fosco Fabricators, Inc. — Signing
 Frederick Asphalt Products, Inc. — Bit., Concrete Paving
 Groves, S. J. and Sons Co. — Road and Bridge Constr.
 Haverhill Contracting Co., Inc. — Roadway, Excavation
 Highland Engineering Corp. — Landscaping
 Highway Supply Corp. of Maryland — Guard Rail, Underdrain
 High Welding Co. — Structural Steel Erection
 Industrial Painting Contruction Corp. — Steel Bridge Painting
 Intercounty Construction Corp. — Water Mains and Sewers
 Interstate Bridge Co. of Md., Inc. — Bridges
 Jordon, Dewey, Inc. — Bridges
 Kibler, E. and J., Inc. — Roadway Excavation
 Kline, Richard F., Inc. — Road Construction
 Lehman, P. E. — Clearing and Grubbing
 Lisbon Construction Co. — Concrete Paving
 Miller and Greenland — Drainage Structures

Mitchell, E. Stewart, Inc. — Bituminous Surface Treatment
 Montgomery Construction Co., Inc. — Bituminous Surface Treatment
 Mueller, Mathias — Soil Cement Base Course, Landscaping
 National Advertising Co. — Signing
 Nissley, J. Richard, Inc. — Box Culvert, Bridge
 Nissly, John J. — Structural Steel Painting
 Nunn, E. H. Construction Co., Inc. — Sewer and Stream Relocation
 Old Line Contracting Co., Inc. — Concrete Curb and Gutter, Concrete Slope Protection
 Phelps Brothers Land Clearing, Inc. — Clearing and Grubbing
 Pile Drivers, Inc. — Pile Driving
 Princemont Construction Corp. — Bridge and Road Construction
 Rach, Paul J., Inc. — Concrete Curb and Gutter, Concrete Sidewalk
 Regal Construction Co., Inc. — Bridge and Road Construction
 Reliable Contracting Co., Inc. — Soil Cement Base Course
 Ridgely Construction Co., Inc. — Excavation
 Rimshaw, Merritt — Clearing and Grubbing
 Roberts, C. J. Reinforcing Steel Co. — Reinforcing Steel
 Ruckman and Hansen, Inc. — Potomac River Bridge at Cabin John
 Russell, T. Edgie General Contractor, Inc. — Roadway and Bridges
 Sanford Construction Co. — Bridge
 Schrom Construction, Inc. — Roadway Excavation
 Seaboard Painting Co. — Steel Bridge Painting
 Seals, Inc. — Concrete Pavement Joints
 Seeders, Inc. — Landscaping
 Sheetz, John D. Construction Co., The — Bridge
 Smith, A. H. — Road Construction
 Smith Brothers Pile Driving, Inc. — Bridges and Pile Driving
 Spanos Painting Co. — Steel Bridge Painting
 Suburban Engineering and Contracting Co. — Bridge
 Talbot and Marks — Road Excavation and Drainage
 Taylor and Keebler, Inc. — Road Construction
 Teer, Nello L. Co. — Road and Bridge Construction
 Universal Construction Corp. — Bridge
 Via Co., Inc. — Cement Modified Subgrade
 Wagman, G. A. and F. C., Inc. — Structures
 Warfield-Hamm Construction Co., Inc. — Road and Bridge Construction
 Williams Construction Co., Inc. — Concrete Paving
 Williams Paving Co., Inc. — Water Mains and Sewers
 Wilson, W. F. and Sons, Inc. — Landscaping
 Woodbine Nurseries — Landscaping
 Wright Contracting Co. — Road and Bridge Construction

Figure 7. Contractors for construction of Maryland portion of the Capital Beltway.
 Source: "Capital Beltway," 1964 leaflet produced by State Roads Commission of Maryland, in "Capital Beltway" folder, vertical file; Maryland Room, University of Maryland Libraries, University of Maryland, College Park.



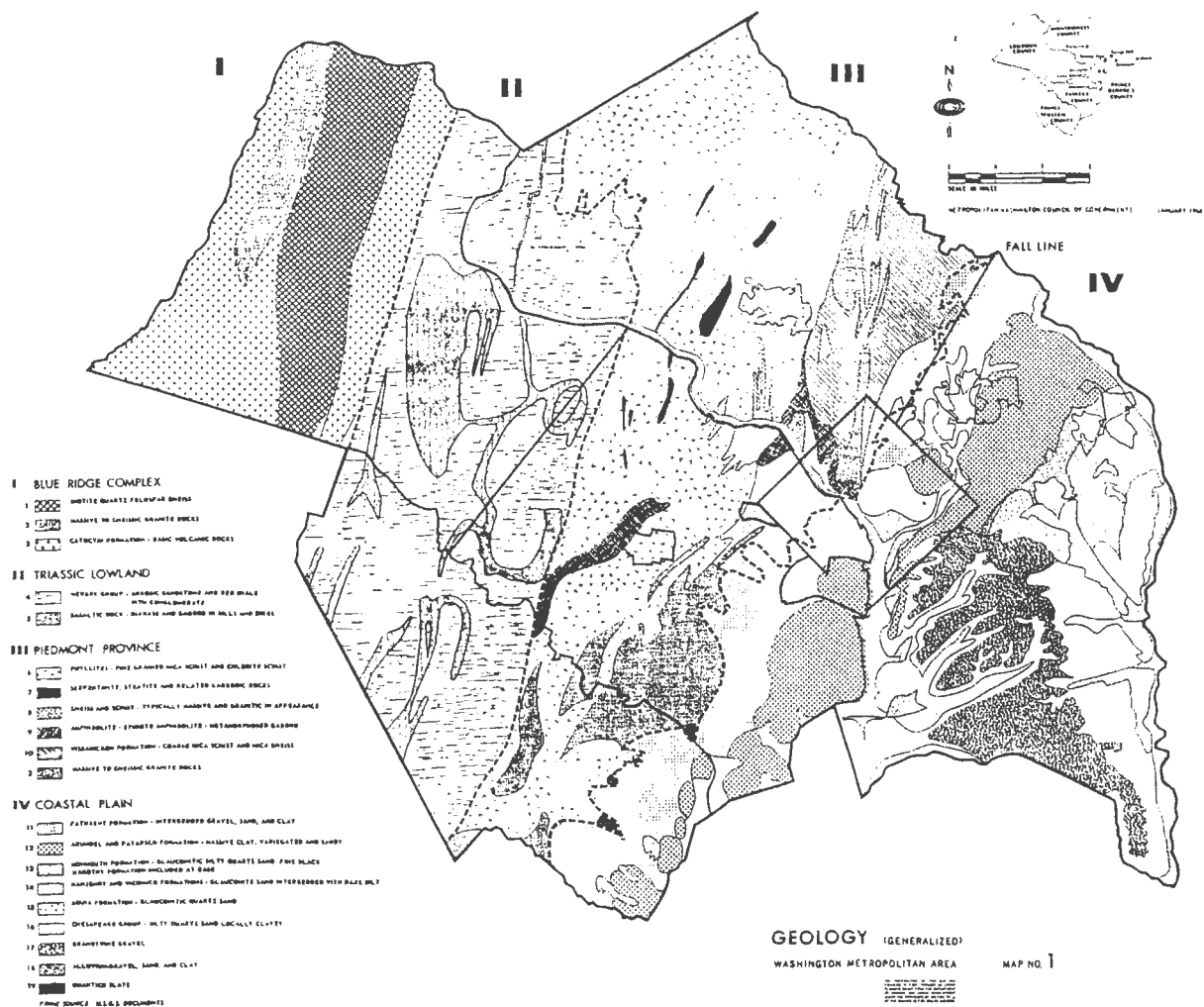


Figure 9. Geology of Washington metropolitan area. The District of Columbia is represented by the portion of the rotated square, overlapping provinces III and IV, which lies north and east of the unlabeled Potomac River. The area within the square but south of the river has belonged to Virginia since 1845. The Capital Beltway circumscribes the District and the continuation of its square boundaries at a distance of about three miles, or roughly 0.5 cm, from those boundaries. Source: Metropolitan Washington Council of Governments. Natural Features of the Washington Metropolitan Area (Washington: Metropolitan Washington Council of Governments, 1968), 5.

Beyond The Beltway

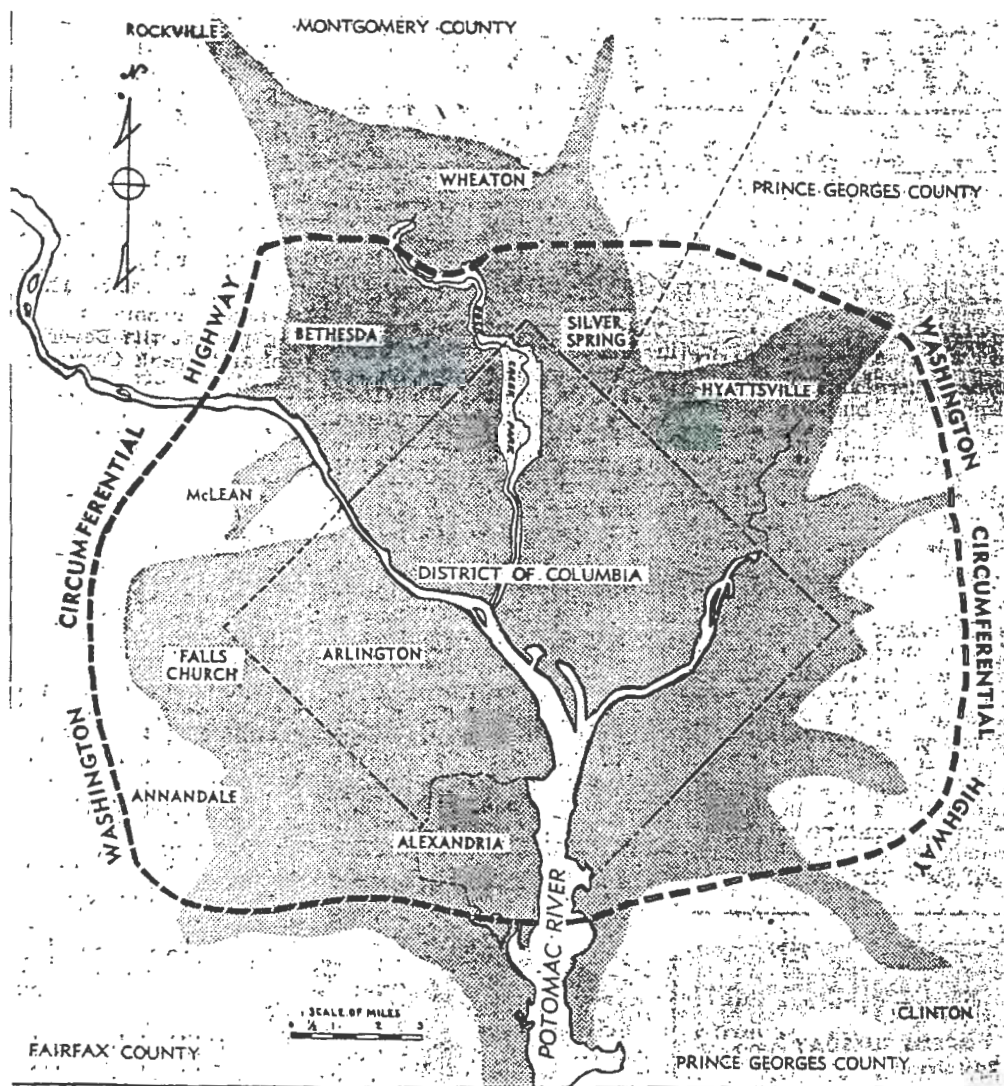
© Liz Donaldson 1988

A

B

Named after a contradance band *Beyond the Beltway* that included, Al Taylor, Marty Taylor, Larry Brandt, and myself. There's also a song of the same name by Ritchie Schuman.

Figure 10. "Beyond the Beltway." Reel composed by Bethesda musician Liz Donaldson. Reprinted with permission.



Amoeba-like sprawl of residential areas (shown in gray) indicates why industry avoided locating next to Circumferential route in Montgomery County. Planners think Rockville area, plus much of Fairfax and Prince Georges Counties offer ample room for sites.

Figure 11. 1961 map of residential development in Washington area. Source: Evening Star, 30 March 1961: B-12. Copyright 1961, The Washington Post, reprinted with permission.

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Maryland Libraries, College Park, Md.

Richard F. Weingroff collection, Federal Highway Administration, Washington, D.C.

RECORDED INTERVIEWS

* indicates pseudonym by request of informant

Timothy Bell	February 2001
Rick Blandford	February 2001
Pat Boyer (*)	January 2001
M. Slade Caltrider	September 2000
Isidore Elrich	January 2001
Douglas Feaver	January 2001
Paul Foer	October 2000
Jim Giese	January 2001
Minka Goldstein	March and May 2001
Ethan Gould (*)	February 2001
Robert Grow	January 2001
Craig Hinnens	February 2001
Jack Hodge	January 2001
Loren Hudziak	January 2001
Paul Hughes	January 2001
Murray Hunt Jr.	January 2001
Bahram Jamei	January 2001
Larry Kidwell	March 2001
Drew Knight	February 2001
James Landolt	December 2000
Lisa Loflin	January 2001
Robert Mannell	January 2001
Bill McKinney	April 2001
Carlene McWhirt	January 2001
Raleigh Medley	March 2001
Lorenzo Miller	March 2001
Sidney Miller (*)	February 2001
Russell Newell	March 2001
Isadore Parker	October 1998
Fred Pavay	October 1998
Neil Pedersen	March 2001
Kenneth Plunkett	February 2001
Maj Shakib	March 2001
William Shook	February 1999
Chris Shulman (*)	December 2000
Robert Spence	January 2001
Margo Stanton	January 2001
Patrick Stanton	January 2001
Doxey Tobocman (*)	February 2001
Leslie Treistman (*)	January 2001

Charlie Watkins
Lester Wilkenson Jr.
Tyrone Young

January 2001
October 1998
January 2001